

EXECUTIVE COUNCIL

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List of Documents:	Appendix A - Falkland Islands Environment Strategy 2021 – 2040 Appendix B – Environment Strategy for the Falkland Islands Engagement Report Appendix C – Comments and response from second round of stakeholder engagement

1. Recommendations

Honourable Members are recommended to:

- (a) Note the appended documents, including the Environment Strategy (App. A), the Engagement Report from early stakeholder engagement (App. B) and the comments and responses from the second round of stakeholder engagement (App. C).
- (b) Approve the Falkland Islands Environment Strategy 2021 – 2040 as presented at Appendix A.
- (c) Approve that the Chief Executive can make minor amendments to the document, to correct typographical or formatting errors.

2. Additional Budgetary Implications

None for immediate approval of the strategy. However, there will be longer term budgetary implications for the workstreams that flow from the Environment Strategy.

3. Executive Summary

- 3.1 Environmental issues have become more complex and demanding and there are growing global concerns around the environment and dealing with the massive and complex challenges of climate change and biodiversity loss.
- 3.2 The Falkland Islands Government (FIG) is dedicated to addressing key environmental challenges, as reflected in the Islands Plan 2018 – 2022 objective to “*Develop and implement a comprehensive environmental strategy including necessary regulations.*”
- 3.3 The Falkland Islands Environment Strategy 2021 – 2040 is a key document that will provide an overarching framework to help guide the development of future policy creation and the further incorporation of environmental considerations into the work of FIG.
- 3.4 The strategy sets out a vision for the future, as well as strategic objectives that will guide work across government and the community to help address issues and opportunities with respect to the environment.
- 3.5 Multiple workstreams would flow from the strategy, if approved, with a selection of some key actions listed in the action sections. This is not an exhaustive list of actions. It is intended that the multiple workstreams will be detailed through ongoing work, with priorities guided by a number of mechanisms including ExCo, the Budget Select Committee process and through the work of a newly created environment strategy programme board. The programme board is intended as an internal mechanism to guide work within FIG, assigning responsibilities and tracking internal progress. It is proposed that it would be chaired by the Chief Executive and have in its membership senior civil servants, including the Head of Environment. The Environment and Sustainability screening section on papers submitted to ExCo will now be able to reference the Environment Strategy in terms of alignment or otherwise.
- 3.6 There will also be multiple opportunities for the public and other stakeholders to work towards the objectives of the strategy over its 20-year span. This could be through working on specific projects and workstreams collaboratively with government, or through stakeholders identifying how their work can help to contribute to achieving the strategic objectives.

4. Background [and Links to Islands Plan and Directorate Business Plan/s]

- 4.1 One of the key environmental objectives of the Islands Plan 2018 – 2022 is to “*Develop and implement a comprehensive environmental strategy including necessary regulations.*”
- 4.2 This national objective relates to challenges that governments everywhere are facing; environmental issues have become more complex and demanding and there are

growing global concerns around the environment and dealing with the massive and complex challenges of climate change and biodiversity loss. Local consideration of the environment has also grown; government officials are frequently asked questions about the natural environment and environmental issues are a regular topic of local discussion at public meetings and on social media.

- 4.3 The Environment Department and Head of Environment post were established (*ExCo 31/20*), starting October 2020, to support the delivery of Islands Plan objectives with respect to the environment, including the delivery of an Environment Strategy.
- 4.4 Work on the Environment Strategy gained pace at the end of 2020 with a cross-departmental workshop within FIG and ongoing work on an internal stock take of policies and work underway. Direct involvement from across government was important to ensure a coherent approach and successfully integrate the strategy across relevant policy areas. As part of this process over 170 relevant documents were identified and recorded. Key policy interactions are identified in the main text of the strategy.
- 4.5 Following initial internal stakeholder consultation, permission was gained in *ExCo 21/21* at the end of January 2021 to undertake external stakeholder consultation.
- 4.6 In February, March and April 2021, extensive stakeholder engagement was undertaken with 15 workshops, including with key stakeholders and the public in Camp and Stanley. A public consultation was also carried out to gather views on the environment, test broad attitudes early on, and learn what is most important to the people who live in the Falkland Islands. It had 206 responses.
- 4.7 The responses of stakeholders and the public were captured and thoroughly analysed. These are summarised in the stakeholder engagement report (Appendix B). This allowed the scoping of local issues and opportunities.
- 4.8 Issues and opportunities were further informed and refined by an analysis of international literature, including environment strategies from other countries, multilateral environmental agreements, global documents like UN sustainable development goals and relevant scientific and environmental publications. This helped to benchmark against international best practice and identify issues of global significance.
- 4.9 Internal workshops within FIG followed to refine issues and opportunities, and identify and agree objectives and actions to address these. Draft versions of the strategy were reviewed by the corporate management team and members of the legislative assembly, refining and discussing strategic goals and objectives and how these could be realised in the long-term across government, as well as beyond government. It was recognised that the objectives and the few select actions were only a starting point, and that multiple workstreams and effort would be needed to fully define and implement actions through the life of the strategy.
- 4.10 The final draft of the Environment Strategy was then taken to the Environment Committee and was put out for public comment.

- 4.11 These comments were addressed through changes to the text of the Environment Strategy and will further be taken under consideration in the many workstreams that flow from the strategy. Additional clarity and explanation of some processes or points will also be achieved through communications around the strategy.
- 4.12 The strategy summarises the vision for the future of the natural environment of the Falkland Islands. It also outlines some of the major challenges and opportunities to be addressed and a suite of long-term strategic objectives that are intended to help everyone across the Islands to work towards achieving the vision.
- 4.13 As the strategy is a 20-year strategy multiple workstreams and a suite of different actions that will evolve over this time-period will be needed to achieve the many objectives. A selection of some key workstreams and a selection of actions that are anticipated are listed. Further actions will be detailed and refined through the life of the strategy. Some workstreams will involve the creation of major pieces of policy work, e.g. the ongoing pollution prevention and control work (ExCo 64/20) and wildlife policy work (ExCo 97/20). Future policy work, such as this, will involve further stakeholder engagement as per standard government practice.
- 4.14 Everyone can, and must, play a role in protecting and enhancing our environment if we are to realise the future we want, and the Strategy provides a national framework to guide this. Achieving the objectives set out in this strategy will require participation from individuals and organisations, working together in collaboration with government; a combination of top-down and bottom-up effort across all sectors. Through the ongoing work that flows from the strategy, connections and opportunities to work with the community and stakeholders will be explored for the various workstreams.
- 4.15 For business and industry, this strategy indicates government priorities and direction for action. These objectives and areas of action may help to identify opportunities for private-public partnerships or other ways to work together.
- 4.16 For non-governmental organisations operating in the environmental sphere, this strategy sets out Falkland Islands environmental challenges and opportunities and some of the actions government plans to take to address these. This may help to shape local research priorities and provide guidance for how non-governmental organisations (NGOs) may wish to work towards these common objectives.
- 4.17 For members of the public, this strategy details the government's commitment to protecting, managing and enhancing our environment. Everyone in the Falkland Islands has a role to play in building our future together and the strategy can help us all think about how we want to do that.
- 4.18 For those in government, this strategy sets an overarching policy direction in relation to environment, lists a shared set of objectives to work towards, and can inform decision-making at all levels. We will work closely with all of the groups identified above to understand how they can contribute to achieving the strategic objectives

5. Options and Reasons for Recommending Relevant Option

- 5.1 **Option 1. Recommended.** Approve the Falklands Islands Environment Strategy 2021-2040 in Appendix A. The strategy will provide objectives that departments across the Falkland Islands Government can work towards.
- 5.2 **Option 2.** Not recommended. Do not approve the Falkland Islands Environment Strategy 2021 – 2040. This will mean that work will continue in a non-centralised way and there will not be an overarching policy framework with respect to the environment or a set of strategic objectives to help guide work.

6. Resource Implications

6.1 Financial Implications

There are financial implications for the multiple workstreams and actions that will flow from this strategy over its 20-year span. The specific financial implications of each workstream will be determined through the fine-scale work that will follow the strategy. The allocation and prioritisation of the resources needed to implement this strategy will be guided by the priorities of the Assembly, and will be subject to consideration in future budget processes.

6.2 Human Resource Implications

There are human resource implications for the multiple workstreams and actions that will flow from this strategy over its 20-year span. Resourcing within government will be evaluated through the usual government mechanisms and through the work of the environment strategy programme board. The allocation of the human resources needed to implement this strategy will be guided by the priorities of the Assembly.

6.3 Other Resource Implications

None.

7. Legal Implications

- 7.1 There are no immediate legal implications of this strategy, beyond existing commitments. However, there are likely to be some legal implications from some of the workstreams that emerge from this strategy and which are yet to be developed. The implications of these workstreams will be evaluated as and when they progress through standard government procedures.

8. Environmental & Sustainability Implications

- 8.1 The strategy has the environment and sustainability at its heart. A key part of the vision of the strategy is that the future natural environment of the Falkland Islands supports resilient, healthy and functioning ecosystems that all our community and future generations can continue to enjoy and benefit from.

9. Camp Implications

- 9.1 The strategy is significant for Camp. The Falkland Islands land and freshwater environments are almost entirely made up by Camp. And those living in Camp are key custodians of our natural environment and its biodiversity. The strategy was very much designed with this in mind and is intended to apply to everyone in the Islands. Consideration will continue to be given to Camp through the implementation of multiple workstreams, particularly those that flow out under land and freshwater.

10. Significant Risks

- 10.1 There is a risk that in not having a co-ordinated and cross-governmental approach to tackling environmental issues that environmental degradation will result in a loss of biodiversity and ecosystem integrity. As explained in the strategy, we depend on the natural environment to provide us with ecosystem goods and services that support our well-being and our economy.

11. Consultation

- 11.1 There has been extensive consultation both within and outside of government. Key stakeholders and the general public have been consulted as outlined in the Strategy Development Process in Annex 1 of the Environment Strategy document.
- 11.2 Subsequent to the draft Environment Strategy being released for comment, the Environment Committee held a special meeting to discuss the document and a presentation was made to the Chamber of Commerce. In addition, comments were received by the South Atlantic Environmental Research Institute and Falklands Conservation. Comments were generally supportive of the Strategy although a common theme of discussion was that of translating the Strategy into practice and ensuring that action plans were developed in a timely manner, with SMART objectives, along with ensuring that public input through mechanisms such as the Environment Committee continued to be an element of FIG's approach to ongoing issue identification. Conversations also took place in relation to the number of strategic goals and objectives within the Strategy, the necessity to prioritise and the financial implications of the Strategy over the short and long term.

12. Communication

- 12.1 External communication will be achieved through existing government communication channels. In addition to launch related media materials for the purposes of immediate promotion both within the Islands and internationally, opportunities will be taken in the next several months to develop a set of information products that will seek to explain and interpret the strategy to a variety of audiences, not only in the Islands but also in the United Kingdom and South America. This may include, for instance, a short version of the strategy which summarises its main commitments. In such instances, the exact text may be changed to enable better understanding. Immediate opportunities to explain the strategy to international audiences include the upcoming party conferences in the United Kingdom, COP 26 and COP 15.

FALKLAND ISLANDS ENVIRONMENT STRATEGY 2021- 2040

Falkland Islands Government



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ACKNOWLEDGEMENT:

This strategy would not have been possible without the contributions from multiple individuals from across government and the community of the Falkland Islands who shared their views and helped to inform the vision, objectives and the necessary steps to build the future of our Islands' environment together.

Falkland Islands Government Environment Department

Secretariat

Stanley

Falkland Islands

2021

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1. FOREWORD

The environment is essential for human existence – our health, our wealth, and our overall wellbeing are intrinsically linked to our natural world. It plays a central role in the sustainable development of our economy, our community and our nation as a whole, and it is vital in determining our quality of life. We therefore have a moral duty and responsibility to advocate for the environment and to take meaningful actions to preserve and conserve precious natural resources for generations to come.

We rely on our ecosystems to provide us with clean water, air, food and shelter. Our lands provide grazing for our livestock and healthy soils to grow food; our seas support a wealth of fish and marine life. Many of the services our ecosystems provide us with are irreplaceable. We also benefit from our outdoor spaces as a place to relax, play and keep healthy. In the Falkland Islands, the foundations of our livelihoods are reliant on our environment – fishing, agriculture, tourism – these key sectors would not exist without our natural resources, without healthy ecosystems.

Living closely alongside nature, as we've done for generations, we cannot fail to recognise just how important the natural environment is to us, not just because of everything that it provides, but as a vital part of the Falkland Islands national identity and way of life. Our beautiful Island nation is unlike any other – with exceptional landscapes, seascapes and a diversity of flora and fauna – so we must not ignore the challenges that we face. Through the implementation of this Environment Strategy, we hope to make clear our commitment to respect and protect our unique home and resources.

However, at close to 8 billion people, human society is a dominant influence on our planet and our actions have caused degradation of our environment. Human activity has created waste, overused natural resources, and impacted our global climate. Environmental issues have become more complex and demanding over time and are a challenge for governments across the world. This is no different in the Falkland Islands and we have a role to play in contributing to efforts to tackle the global problems which affect communities everywhere, as well as managing and protecting our own environment and natural resources through local action.

We have already taken steps towards living more sustainably, but there is much more to be done. This strategy recognises the obstacles and opportunities facing us and sets out our objectives for the next 20 years, so that we can work towards a shared vision for the future of our environment. It identifies the issues we need to address to make this future a reality, and some of the actions we will take to get there. It is our hope that everyone will get behind this strategy and do what they can to build a better future together.

While momentum towards sustainability is growing, we need the environment to be at the forefront of our collective conscience. We need everyone in the Falkland Islands – the government, businesses and the public – to not only be aware, but to take action. Together we can, and will, make a difference.

Members of the Legislative Assembly of the Falkland Islands Government



Mt. William, credit: Genti Cena

2. HIGHLIGHTS

OUR VISION

We envision a future where our natural environment is:

For All

The Falkland Islands' natural environment supports resilient, healthy and functioning ecosystems that all our community and future generations can continue to enjoy and benefit from.

Biodiverse

The quality of our habitats is improved, biodiversity has been retained and we benefit from flourishing oceans, coasts, land and freshwater.

Healthy

The Islands' air, water, and soils are clean.

Sustainable

We use and manage our natural resources efficiently and sustainably, and our thriving economy respects our environmental assets.

Adapted

Renewable energy has been embraced, we play our role in tackling the climate emergency, and are able to understand and adapt to global change at a local level.

Connected

Our connection to nature continues to be a vital part of our identity, and engagement with our environment and natural heritage is enhanced across the community.

OUR STRATEGIC OBJECTIVES:

Biodiversity and Ecosystem Integrity

- to continue working towards integrating biodiversity (i.e. considerations of ecosystem integrity) across environmental and economic agendas, acknowledging that the integrity of ecosystems underpins the continued provision of all ecosystem goods and services for current and future generations
- to protect and enhance our biodiversity (ecosystem integrity), reducing its loss through tackling threats
- to work towards preventing the introduction of invasive species, reducing their spread and reducing, eliminating or appropriately managing them
- to mitigate for degradation and promote restoration of native ecosystems, where possible

- to work towards understanding and managing creeping change (slow, incremental environmental degradation) before environmental thresholds are passed that have costlier and fewer solutions
- to increase knowledge of the marine, terrestrial and aquatic environments and biodiversity, through identifying and filling key knowledge gaps, to support effective governance and decision-making

Oceans and Coasts

- to have healthy, functioning and robust marine and coastal ecosystems in the Falkland Islands through protections and management
- to ensure that future generations can benefit from marine and coastal ecosystems and the goods and services they provide by sustainably managing human activities which impact our oceans and coasts
- to actively participate in the integrated, cross-boundary management of marine ecosystems in the South West Atlantic, that considers cumulative impacts and contributes to the good condition of marine and coastal ecosystems

Target: establish marine managed areas with a target of 15% of our marine waters designated and with management plans

Action: establish additional National Nature Reserves

Land and Freshwater

- to manage and protect our native terrestrial and aquatic ecosystems (including wetlands) and the quality of land and water
- to improve terrestrial and aquatic ecosystem integrity, for the benefit of current and future generations, through considering the ecological impact of and improving land-management approaches, practices and incentivisation
- to take an integrated land-water management approach that adopts a long-term view and incorporates ecological considerations alongside social and economic ones

Climate Change

- to reduce our carbon emissions through transitioning to using renewable (low carbon) energy sources for power generation
- to consider and plan for the possible extent of the multiple effects of climate change for our ecosystems, society and economy and how these may interact with other human impacts
- to understand the potential of native ecosystems for mitigating and offsetting carbon emissions, e.g. peatlands, wetlands and marine ecosystems
- to consider the potential negative environmental effects of climate change mitigation and adaptation measures

Action: investigate carbon accounting for the Falkland Islands to understand our current net carbon emissions and to help us set targets around carbon neutrality

Energy and Non-renewable Resources

- to increase our use of renewable energy sources, with a focus on reliable and appropriate energy with low environmental impacts

- to promote energy efficiency and savings, slowing down and stabilising the consumption of energy while ensuring that the needs of people are met
- to consider whole of life impacts of measures intended to reduce energy use or of transitioning to renewable forms of energy

Action: increase our reliance on renewable energy, with Stanley's primary electrical supply being 100% renewable by 2050

- to conduct the extraction of non-renewable resources, including any hydrocarbon development, in a way that values and conserves our unique biodiversity and ecology, supported by effective regulation

Waste and Pollution

- to improve pollution controls in the Falkland Islands, with a particular focus for onshore pollution controls
- to improve waste management in the Falkland Islands, including sewerage, hazardous, and e- waste, to reduce impact on the environment
- to use resources efficiently, keeping them in use for as long as possible to reduce waste and its environmental impacts through the promotion of re-use, remanufacturing and recycling
- to promote changes in behaviour, including consumption patterns, to reduce waste and pollution

Action: in partnership with BFSAI, create a waste management facility and a new landfill designed and built to high specifications by 2025 to minimise environmental impact

Sustainable Development and Quality of Life

Action: improve environmental assessment frameworks for land-based development

- to have development that is sustainable, within ecologically meaningful boundaries, so that the natural environments on which we ultimately depend are not undermined
- to manage and protect our heritage - natural, geological and cultural, our sense of wild places, open skies and small community spirit
- to consider, manage and minimise the impact of economic activities and development on the environment, taking a long-term strategic approach that considers future generations and incorporates environmental assessment
- to consider the strong links between natural environment and human health when making decisions and policies, recognising that an impact on environmental health frequently translates to an impact on human health

Science and Innovation

- to create a strong, well-managed and accessible science and evidence-base to help support decision-making with respect to the environment, including for helping to cope with and adapt to environmental change
- to help facilitate science, research and the development or implementation of new technologies, methods or approaches
- to have a strong and responsible culture of innovation across the Falkland Islands; engaging in horizon-scanning and investigating the potential environmental benefits and impacts of new technologies, industries and practices
- to continue to develop skills to enable innovation and research, e.g. STEM (Science, Technology, Engineering and Mathematics), for the Falkland Islands
- to future-proof technologies and approaches in the Falkland Islands, particularly in light of global shifts, e.g. environmental change, green economy

Action: increase capability within government to dedicate to exploration of opportunities for development in science and innovation (e.g. strategic horizon-scanning)

Communication and Education

Action: work together with the private sector on projects or initiatives that could benefit the environment, in-line with the actions and objectives set out throughout the strategy

- to improve communication and sharing of knowledge, data and information related to the environment
- to promote sustainable behaviour and environmental stewardship throughout the community
- to embed environmental awareness in lifelong learning, including education on the Falkland Islands' natural environment and the relationship between environment, society and economy
- to promote skills development to support the global shift towards a green economy and enable the local community to adapt to respond to environmental issues, e.g. global change, and opportunities in the Falkland Islands

There are many actions we need to work towards the strategic objectives and achieve this future. The actions and targets above are indicative of some of those set out in Chapter 8 (p. 41). Further actions will be developed, prioritised and implemented through the mechanisms set out in Chapter 6 (p. 19).

We'll need to adapt to emerging environmental issues and as new evidence and knowledge is generated. The strategy is therefore envisioned as a long-term but living document that will serve as the start of a journey for everyone across our community.

This is a national strategy, so everyone across our community will be involved in putting this strategy into practice, looking for their own ways they can work towards the vision. The role of government is to provide leadership and direction, as well as guiding more detailed plans for action. Part of this

detailed planning will involve identifying links with people from across our community and ways that they can contribute.

Within government, the strategy takes a “whole of government” approach, which means that responsibilities will lie across all directorates and environmental considerations will be incorporated into policy development and decision-making. The Environment Department will “own” the strategy document. Individual directorates will look to the overarching vision and strategic objectives of the Environment Strategy to guide their own direction and operations, and will also be responsible for delivering individual actions or certain workstreams.

As a first step, to ensure that the objectives are integrated into decision-making, implementation of the Environment Strategy across directorates will be actioned through existing government mechanisms – the corporate planning process, budget process and ExCo reports, as well as through the establishment of an Environment Strategy Programme Board, an internal civil-service mechanism to guide FIG’s delivery of the strategy. The programme board will prioritise actions and address some conflicts between objectives or actions for workstreams flowing out under the strategy. It will bring together teams of representatives from across government with different skills and backgrounds to define and tackle the workstreams flowing out of the strategy. Directorates will report back to the programme board on their activity on a regular basis. The programme board will track progress towards the strategic objectives, putting in place regular monitoring and review mechanisms. It will provide reporting, making publicly available a summary of the key activity every year, with a full review of progress towards strategic objectives every five years.



3. OUR HOME

The Falkland Islands, an archipelago in the South Atlantic lying approximately 300 nautical miles off the mainland of South America and 8,000 miles from the United Kingdom, is home to a community of around 3,200 people who live and work in this British Overseas Territory. We are proud of our unique environment and its rugged natural beauty. It's a key part of many of our day to day lives and has been for the history of our Islands, with ninth-generation Islanders having strong links to the Islands' farming and maritime history.

Being an island nation, we have a vast marine environment – the Falklands Conservation Zone – and our coastal ecosystems are important breeding areas for many marine mammals and birds. Many wetlands and freshwater ecosystems dot our Islands and our terrestrial environment has nineteen land habitat types across 12,173 km² [1], [2]. From the smallest insects and mosses that creep over our rocks, to the rare and majestic birds that nest on our tussac islands, and the iconic penguins, albatross, seals, whales and dolphins that swim our seas or breed on our shores, our beautiful land and oceans are teeming with life.

It's not surprising then, that our economy depends on our natural environment; from the fisheries that are the cornerstone of our economy, to agriculture which is historically and culturally important, to tourism with growing numbers of people visiting our Islands in recent years.

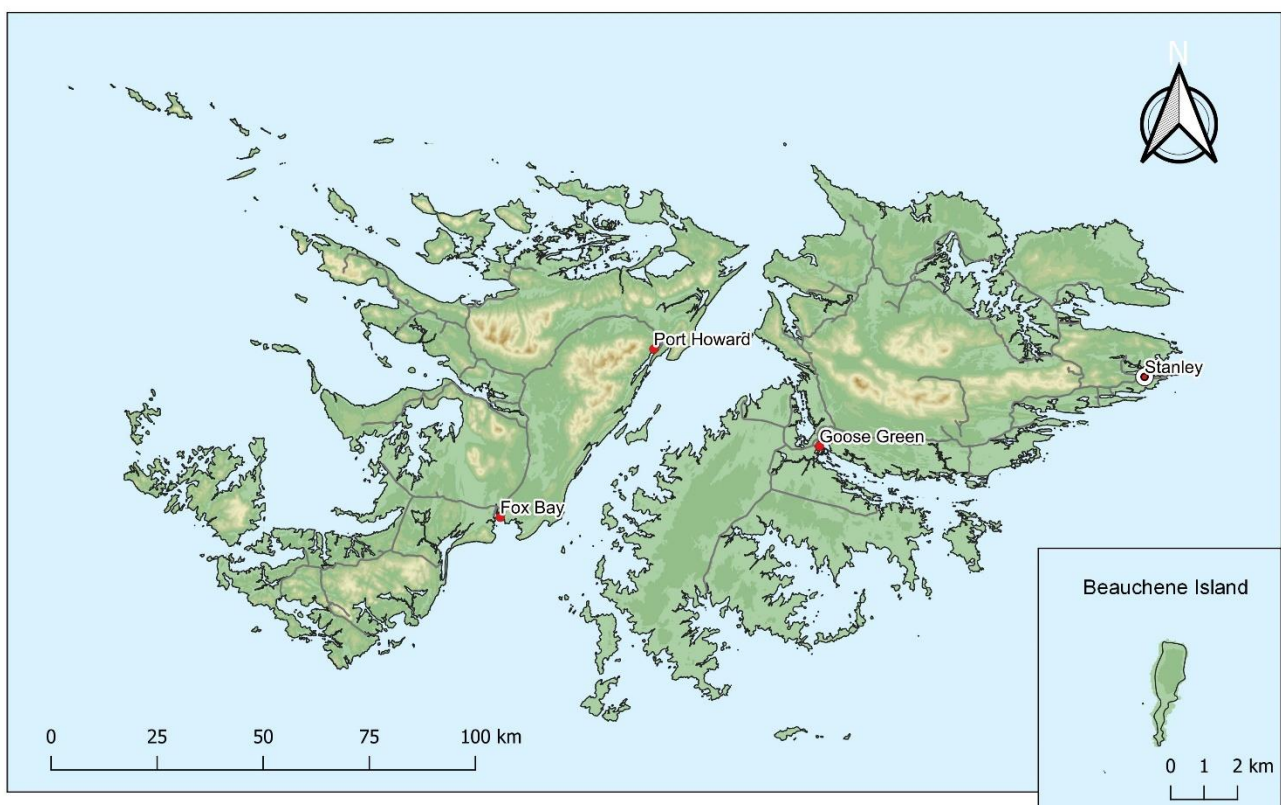


Figure 1: The Falkland Islands comprises two main Islands, East and West Falkland, surrounded by over 700 smaller islands and islets, and Beauchene Island (inset) found to the south.



Queen of the Falklands Fritillary, credit: FITB

The Falkland Islands is a British Overseas Territory enjoys a large measure of internal self-government. Falkland Islanders have a right to self-determination, as described under the United Nations Charter. This was confirmed in the 2013 Referendum, in which 99.8% of the people of the Falkland Islands voted to remain a self-governing British Overseas Territory.

We live in a fairly remote part of the world, which can present

challenges and opportunities. We have links to the UK and South America via air and sea, and we enjoy many internal transport links – a coastal shipping service, regular ferry service, local air service, and approximately 1,000 km of roads across the Islands. Our capital, Stanley, is home to over three quarters of our population. Everything outside of Stanley is known locally as “Camp”, and is home to numerous farms and settlements spread across the Islands., as well as Mount Pleasant Complex on East Falkland. We are small in size, but big in ambition.

Environment

Our environment is both our home and our livelihood and as such we aim to cherish and protect it through sustainable and responsible management of our own resources.

Our archipelago has a cool temperate oceanic climate, with a low annual rainfall of 450 – 600 mm per year that varies across the Islands, and is dominated by westerly winds. There are nineteen different

land habitat types recognised in the Falkland Islands, that support 180 native species of plants, of which 14 are endemic. Broadly, the flora and fauna that live on our land or swim in our waters have affinities

When we talk about the Falkland Islands (natural) environment what we mean is the land and controlled waters, and their dependent or associated ecosystems or habitats. This definition includes all living and non-living components including in and on land, the atmosphere/air, and water.

with that of Patagonia in South America, and many migratory species have strong links with the Antarctic [1], [3].



Black-Browed Albatross, credit: Georgina Strange

Most of our land has a connection to the coast or to freshwater, with our aquatic ecosystems (e.g. rivers and estuaries) supporting six species of fish, including the Falklands Minnow and Zebra Trout, as well as a host of invertebrate species.

Being on the edge of the Patagonian shelf, our oceans are fed by the nutrient-rich Antarctic circumpolar current and have a

high abundance of demersal and pelagic marine species that make rich foraging grounds for many large marine mammals, such as Orcas, Sea Lions, Southern Elephant Seals and South American Fur Seals, and seabirds like Southern Giant Petrel, Black-browed Albatross and five breeding species of penguin. Many of these species breed on and around our shores. There are six known regularly breeding species of marine mammals in our waters (or hauled out on shore) with 31 different species of marine mammals seen in our waters, including some of the world's rarest, such as the Southern Right Whale Dolphin [1], [4].

There is still much to discover about the environment of our Islands, with knowledge gaps in a number of key areas, and this strategy picks up on the need to fill these. For example, climate is changing and baseline data and analysis are needed to understand the extent of changes and to help with future predictions to enable us to adapt.

Indeed, there are many global and local challenges and opportunities to address with respect to the environment, which this strategy touches on.

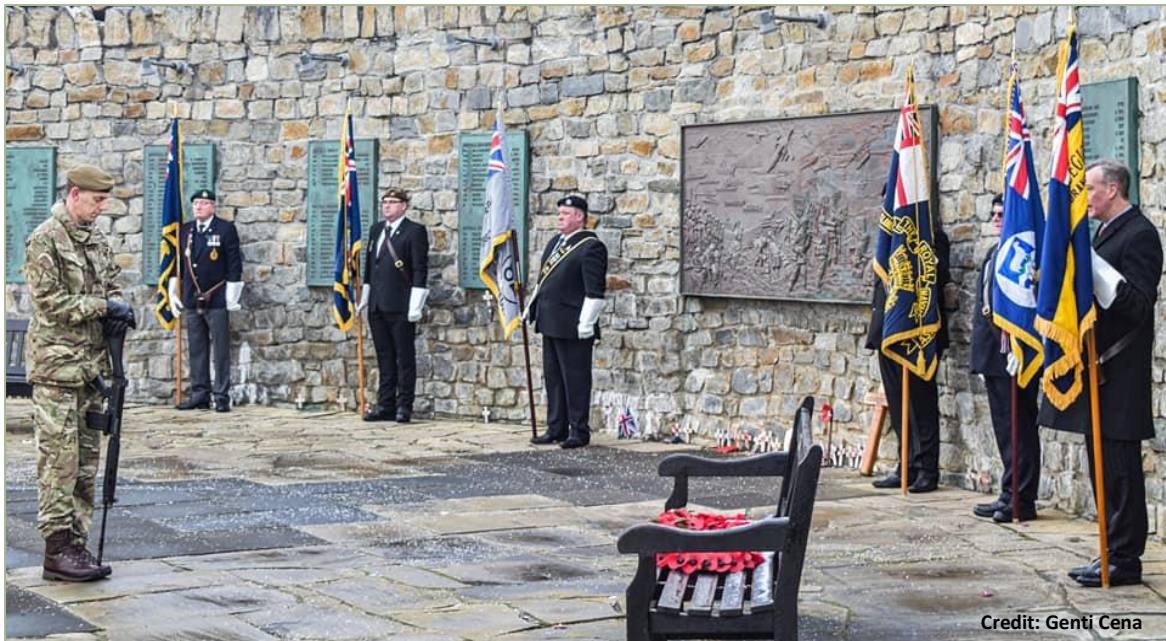
People

Over 3,200 people call the Falkland Islands home; more than three quarters live in Stanley, our capital, with the remainder spread across Camp (our rural area). Additionally, our community includes those living and working at the Mount Pleasant Complex, a significant proportion of the population, which is a British Forces South Atlantic Islands (BFSAI) military base.

The Falkland Islands is unique in its way of life, heritage, history, and traditions and customs. Many Falkland Islanders trace their families through nine generations in the Islands, stretching back nearly 200 years. Now, people from over 60 nations have made the Islands their home and we are proud of our diverse and inclusive culture.



Credit: Maria Forman



Credit: Genti Cena

Ours is a small, friendly, and hard-working community. We are resourceful and self-reliant, and enjoy an excellent quality of life in a modern and thriving society. The freedom of our countryside and proximity of our abundant wildlife are cornerstones of our national identity.

Our population grew by 77% between 1980 and 2016. Net migration is the main driver of population increase. Modest population growth is expected over the next 15 years, with a projected average growth rate of approximately 2% per year to meet expected workforce requirements. The Falkland Islands has a relatively young population compared to other developed economies, and a very low unemployment rate at just 1.0%.

Our small population live in more than 1.2 million hectares, an area nearly two thirds of the size of Wales. This means that few people live and farm or work in vast remote areas. Most land is in private ownership or under private control.

Being a small, remote community means that there are challenges and opportunities. The population size can make the Falkland Islands 'nimble' in some ways, as changes may be easy to communicate and implement. It is also physically easy to network, identify relevant parties and work together.

Conversely, this also means there are limited resources.



Bodie Creek Bridge, credit: Sally Heathman

There are few people working on a diversity of topics, to achieve many goals with limited time and resources. The challenge of scope and scale can be a barrier to many projects and initiatives. Prioritisation and pragmatism in terms of what is reasonably achievable, what level of resources may be required, and where or how these resources may be acquired is very important. The remote

location of the Falkland Islands can also pose practical challenges for resourcing e.g. getting specialists in for a short period of time, and added costs related to movement of anything from staff, to equipment, to disposal of waste. Because of the remoteness and limited numbers of people, labour costs to achieve projects are also high.

The Falkland Islands has a strong, largely resource-based economy which provides a high standard of living and a broad range of public services. In 2018, the Falkland Islands could be ranked fifth in the world by GDP per capita. Historically based on high-quality wool production, since 1986 the dominant industry has been fishing. Wool and meat also play a significant part – and the emergent tourism sector has seen rapid growth in the last 15 years. As outlined in our economic development strategy [5], our ambitions for long-term sustainable growth and enhanced economic prosperity rely on the development of these main market sectors, as well as improved infrastructure, scientific research, and new activities including offshore hydrocarbon production.

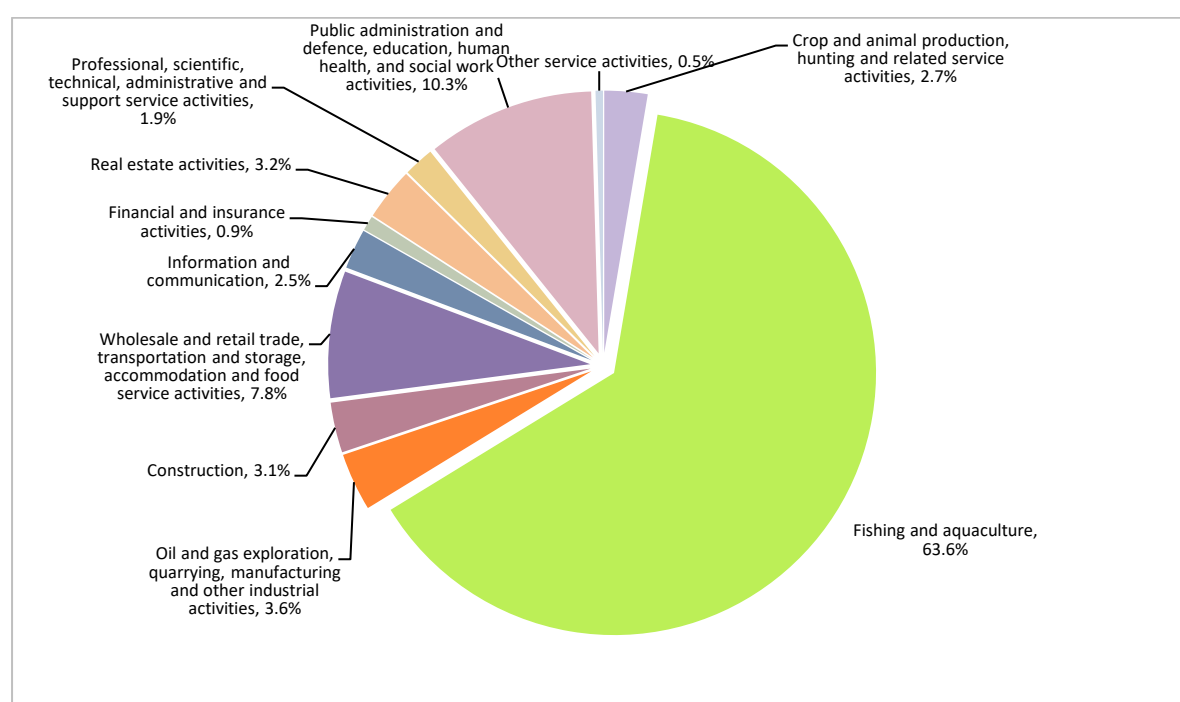


Figure 2: Gross value addedⁱ by industry in 2018, current pricesⁱⁱ. The breakdown of activities in this figure reflects the International Standard Industrial Classification of All Economic Activities (ISIC), i.e. the international reference classification of productive activities, which main purpose is to provide a set of activity categories that can be utilized for the collection and reporting of statistics in a standardized way across countries. Further details may be found in the source *Falkland Islands National Accounts 2009 – 2018*, published 2020 [6].

ⁱ Gross Value Added (GVA) is the value of an industry's outputs less the value of intermediate inputs used in the production process. GVA broadly corresponds to the sum of wages and salaries, operating surplus and depreciation. GDP is the total sum of GVA from all economic sectors of a nation (plus taxes on products less subsidies on products).

ⁱⁱ Figure presents a static picture of the Falkland Islands economy at a given point in time. It cannot be used to directly infer the consequences of changes to output by a given industry. For example, were output from the fishing industry to fall significantly, this would be expected to reduce government revenues, and hence ability to spend on public services; it would also affect the businesses that provide support services to the fishing industry. Conversely, a decline in another industry might free-up labour that could be redeployed elsewhere, mitigating the overall negative effects.

4. BUILDING ON PROGRESS

Environmental challenges are a concern globally and locally in the Falkland Islands. There are many areas where we can improve the way in which we address these challenges. This strategy is largely about identifying these areas and how we can work towards a better future, but before looking forwards, it's also good to recognise some of the progress that the Falkland Islands has made over the last 20 years in sustainably managing our environment and use these as a positive example to build on.

- We've created a new Environment Department to expand capacity with respect to developing policy for and sustainably managing our natural environment.
- Vital environmental research and conservation action has been enabled through our Environmental Studies Budget grant programme and through subvention of local conservation and research organisations. This helps us contribute to our commitments under various international multilateral environmental agreements (App. 2).
- Over the past 20 years, the extent of protected areas has increased. Protected areas have been established at Sea Lion Island, praised for its diversity of marine mammals and seabirds, and the Patricia Luxton Nature Reserve at Chartres, praised for its diversity of rare native and endemic plants.
- In 2012 the South Atlantic Environmental Research Institute was formed by FIG to help focus environmental research and provide a globally leading research hub. The centre has since become independent from FIG and undertakes research in the Falkland Islands and beyond.
- We have introduced measures to prevent the bycatch of marine mammals and seabirds. This has significantly reduced the number of seabirds and marine mammals getting trapped or tangled in fishing gear. We've worked together with industry to introduce and improve various measures in our fisheries like bird scaring devices, discard tanks and seal exclusion devices. At the same time, we have refined fishing techniques and gear use to reduce the bycatch of undersized and unintended fish species.
- We have invested in the annual Falkland Islands Seabird Monitoring Programme, now in its 28th year, keeping track of our key seabird species and helping us to monitor the state of populations.
- Our sustainable management has resulted in good outcomes for fisheries like squid (*Doryteuthis gahi*), and our longline toothfish (*Dissostichus eleginoides*) fisheries is certified as sustainable by the Marine Stewardship Council.
- Biosecurity controls at our borders have been helping to prevent the introduction of new non-native, invasive species and pests. A horizon-scanning tool has enabled us to identify those that are most likely to land on our shores.
- We have several programmes in place to eradicate and control some of our most noxious invasive species such as Calafate, thistles, and rodents from our most sensitive habitats.
- As result of our ongoing invasive species control programmes we have helped to successfully eradicate mice and rats from a number of our Islands and continue to tackle the problem. As of 2021, 70 islands (equating to 6,615 ha) have had rodents eradicated and been certified as rodent-free, so that 271 islands are now rodent-free.

- Because our marine environment is precious, it is important that developments meet a high standard. We've therefore worked over the last 20 years to ensure that a rigorous and bespoke regulatory framework is in place for offshore oil industry development and kept up to date to reflect international best practice. This framework has enabled significant development proposals of an offshore oil industry to be appropriately scrutinised for environmental risks and these risks to be mitigated in proposals.
- We've also created a new Maritime Authority with the remit, resources and expertise to protect the maritime environment within the waters of the Falkland Islands.
- Wind turbines have been installed for renewable energy to help meet power demands in Stanley; 30% of Stanley's energy production is met by wind energy.
- We have been promoting renewable energy uptake through grant systems (via the Falkland Islands Development Corporation - FIDC) over the past few decades, with more than 90% of farm businesses in Camp using renewable energy sources. We continue to promote further expansion of renewable energy source consumption and energy preservation, for example, currently encouraging people to switch to renewable solar-thermal heat sources for their heating or improving the thermal efficiency of their domestic properties through FIDC grant schemes.
- We've reduced our energy consumption by installing energy-efficient LED streetlights in Stanley. Through an ongoing replacement programme begun in 2017, and with all new installations being energy efficient, more than 50% of our streetlights are now energy-efficient LEDs.
- New buildings, including the recently built Falklands College, flats on Brandon Road and Sapper Hill, as well as the upcoming FIG housing in Bennett's Paddock are using air-source heat pumps as a replacement for fossil fuel boilers, reducing our overall use of fossil fuels.
- We've partnered with BFAI in the introduction of tin and glass recycling, with 102.9 m³ saved from landfill in this first year, which is equivalent to 10-15% of domestic consumption.

However, there is still much to be done and areas in which we could improve. This is why the strategy seeks to identify issues and opportunities in relation to the environment and to provide direction to help us face these challenges in a collaborative and strategic way going forwards.



Surf Bay, credit: Genti Cena

5. VISION 2040

Our vision for the future of the Falkland Islands, between now and 2040, is that it will be:

For All

The Falkland Islands' natural environment supports resilient, healthy and functioning ecosystems that all our community and future generations can continue to enjoy and benefit from.

Biodiverse

The quality of our habitats is improved, biodiversity has been retained and we benefit from flourishing oceans, coasts, land and freshwater.

Healthy

The Islands' air, water, and soils are clean

Sustainable

We use and manage our natural resources efficiently and sustainably, and our thriving economy respects our environmental assets.

Adapted

Renewable energy has been embraced, we play our role in tackling the climate emergency, and are able to understand and adapt to global change at a local level.

Connected

Our connection to nature continues to be a vital part of our identity, and engagement with our environment and natural heritage is enhanced across the community.



6. THE STRATEGY IN PRACTICE

The Falkland Islands Environment Strategy is a key document that will guide the environmental priorities, policy creation and work of the Falkland Islands Government (FIG) over the next 20 years. Realising our ambitious vision requires, among other factors: good data and evidence to underpin policy and decision-making; strong governance and reporting; robust implementation measures, and co-operation across the community, our approach to delivering the strategy will evolve over time as we learn more about the extent and urgency of the issues we face and the most effective ways to tackle them. However, several principles that form our starting point are outlined below.

Action across the community

Everyone can, and must, play a role in protecting and enhancing our environment if we are to realise the future we want, and the Strategy provides a national framework to guide this. Achieving the objectives set out in this strategy will require participation from individuals and organisations, working together in collaboration with government; a combination of top-down and bottom-up effort across all sectors and driven by the groups below will help to achieve implementation.

- For **business and industry**, this strategy indicates key strategic objectives and workstreams with respect to the environment. The objectives and areas of action can help both government and the private sector to identify opportunities for private-public partnerships or other ways to work together to achieve a common vision.
- For **non-governmental organisations** operating in the environmental sphere, this strategy sets out Falkland Islands environmental challenges and opportunities and some of the actions government plans to take to address these. This may help to shape local research priorities and provide guidance for how non-governmental organisations (NGOs) may wish to work towards these common objectives.
- For **members of the public**, this strategy details the government's commitment to protecting, managing and enhancing our environment. Everyone in the Falkland Islands has a role to play in building our future together and the strategy can help us all think about how we want to do that.
- For **BFSAI**, this strategy serves as a vehicle to identify opportunities to continue to work collaboratively on issues related to sustainability and the environment for the benefit of people living and working in the Falkland Islands.
- For **those in government**, this strategy sets an overarching policy direction in relation to environment, lists a shared set of objectives to work towards, and can inform decision-making at all levels. We will work closely with all of the groups identified above to understand how they can contribute, including through providing expert advice, to achieving the strategic objectives as work progresses.

This is a national strategy, so everyone across our community will be involved in putting this strategy into practice, looking for their own ways they can work towards the vision. The role of government is to provide leadership and direction, as well as guiding more detailed plans for action. Part of this detailed planning will involve identifying links with people from across our community and ways that they can contribute.



Figure 3: The Strategy in Practice.

Implementation within FIG

Within government, the strategy takes a “whole of government” approach, which means that responsibilities will lie across all directorates and environmental considerations will be incorporated into policy development and decision-making. Achieving the strategic objectives and actions will be a co-ordinated effort with, where possible, pooling of resources to tackle the issues at hand. In other words, we seek to take an interdisciplinary approach to tackling environmental challenges; that is, an approach which focuses on the issue or objective and identifies the appropriate resources and skills needed to tackle the problem, drawing from across government and beyond government.

The Environment Department will “own” the strategy document – however individual directorates will look to the overarching vision and strategic objectives of the Environment Strategy to guide their own direction and operations, and will also be responsible for delivering individual actions or certain workstreams. .

As a first step, to ensure that the objectives are integrated into decision-making, implementation of the Environment Strategy across directorates will be considered through the following existing government mechanisms:

- **Corporate planning process:** to identify key workstreams for directorates
- **Budget process:** directorates will be required to bring forward budget submissions for the work allocated to them
- **ExCo Reports:** which will be required to contain an explanation of how the contents of the paper supports the delivery of/aligns with the Environment Strategy or not

Successful implementation of the Environment Strategy in the long term will rely on government moving away from a siloed approach which works only within the existing remit of government directorates. Overall FIG's delivery of the strategy within government will be guided by a new Environment Strategy Programme Board, bringing together representatives from across government, to help guide implementation and provide Executive Council and the public with regular updates on progress. The programme board will bring together teams of representatives from across government with different skills and backgrounds to further define and tackle the workstreams flowing out of the strategy, which may include action plans for specific topics. Action plans will be expected to incorporate, but not be limited to, the actions set out in the strategy. The action-planning stage will also provide a further opportunity to identify potential links with those outside government.

The programme board will also have lead responsibility for co-ordinating the integration of strategy into the work of all directorates, and directorates will report back into the programme board on their activity on a regular basis. They will help to prioritise actions and address some conflicts between objectives or actions for workstreams flowing out under the strategy.

Measuring progress

Tackling environmental problems, which are complex and multifaceted requires change to the way we do things and creative solutions. It will also take time to successfully implement. Just as the environment degrades over time, with slow creeping change (see Chapter 7.1), environmental improvement will not always be immediately visible. It will take time for things to change. To ensure that we stay on track, we will need to measure our progress.

The Environment Strategy Programme Board will track progress towards the strategic objectives putting in place regular monitoring and review mechanisms to track the success of steps we are taking to achieve our objectives and using a range of different metrics. Metrics will include:

- Indicators, which show a statistical trend over time [7] e.g. quantity of waste landfilled, and
- Performance measures [7], which focus on policy interventions and can include quantitative measures, such as number of tussac seedlings planted, or process-based measures such as the introduction of a new protocol or scheme.

The Environment Strategy Programme Board is anticipated to provide reporting, in the form of a publicly available summary of key activity on an annual basis and a full review of progress towards strategic objectives every five years. Internal tracking of progress, actions and planning will take place

on a more regular basis through the programme board, and operational objectives (which will be the responsibility of individual directorates and some of which will flow out of the action plans) will be monitored and reviewed by directorates.

Mechanism for Review

The natural environment is subject to variation and uncertainty, and as highlighted in Chapter 7 there are many knowledge gaps for the Falkland Islands. It's therefore probable that new issues or threats to biodiversity may emerge or become more or less severe over time. This coupled with changes in the Falkland Islands society and economy that are likely to take place over the next twenty years, highlights the need for the strategy to be a living document. At the same time, it is useful for the document to be long-term so that there is continuity and ongoing work towards clear objectives across changes in civil service and government. For this reason, the strategy spans a long period of time but has a built-in review mechanism to ensure that the strategy itself is refreshed periodically. This is likely to coincide with the 5-year reporting process, after which strategic objectives can be reviewed.

For example, where there are major emerging issues or opportunities with respect to the environment, where new evidence suggests changes in the severity of the issues identified in the strategy, or where objectives have been met. This review process is intended to allow for adjustments to ensure that we continue working towards meeting our vision.

Resourcing

Resourcing will be a key factor in delivering the objectives set out in this strategy – and the right mix of public and private funding and financing will be a critical element of this. However, resourcing doesn't only mean

monetary investment. It can also mean: capacity, time, skills, guidance, advice, and countless other resources. The allocation of the resources needed to implement this strategy will be guided by the priorities of the Assembly, and will be subject to consideration in future budget processes.

7. CHALLENGES AND OPPORTUNITIES

Evidence, sometimes anecdotal, suggests that there are many potential issues which affect the natural environment of the

Falkland Islands. Many of these issues are global problems but applied to the local context, while others are specific to our Islands. There are also opportunities to try to tackle some of these issues and better manage our natural environment.

To help us plan the future of our Islands' environment together, we have spoken to people from across our community including the public, scientific experts, businesses, and conservation groups. Through this process and the examination of international strategies and major environmental trends, we identified key issues and opportunities, which were then backed up by further available evidence (for full description of process see Annex 1). These are highlighted throughout this chapter, and are grouped into different themes. Many of these issues and opportunities are interrelated and cut across themes, and the themes are also interrelated. This is because the natural environment, the societies and economies it supports, and environmental problems are complex in nature. In this section we attempt to categorise these issues, as far as possible, to make it easier to plan to tackle them (see Chapter 8 Strategic Objectives & Actions).

7.1. Biodiversity and Ecosystem Integrity

Biodiversity refers to the biological diversity of life on earth, from the millions of species of organisms and their genetic diversity to the variety of ecosystems they inhabit. This biodiversity is key to our wellbeing; ecosystems provide us goods (like fish or peat), and services (like cleaning our water or regenerating our soil) that we rely on. Ecosystems can best provide us with services when they are healthy and functioning properly. Ecosystem integrity refers to the state of ecosystem structure and function; healthy ecosystems – those that have good integrity – have resilient structures and function to 'keep nature running', providing the ecosystem services that support life. Most of the contributions that ecosystems make to our lives are not fully replaceable and others are completely irreplaceable [8]–[10].

***Ecosystem** - an ecosystem is a community of organisms, including humans, interacting with each other and their non-living environment (e.g. water, rocks, air). The concept usually includes the processes that make the system function. Ecosystems are usually defined within geographic boundaries.*

***Ecosystem health or integrity** – refers to the condition of the ecosystem. Generally, an ecosystem is considered to be healthy when it maintains its organisation and functioning and is resilient to stress over time.*

The Falkland Islands has a great deal of native and endemic biodiversity to celebrate and care for, from Cobb's wren to sealions to Dusen's moonwort, from tussac islands to peatlands to coldwater coral reefs. It is also home to some species that are globally threatened, like the Southern and Northern rockhopper penguins, or protected, like Black-browed albatross. This biodiversity is important to us, our children, our Islands, our economy and our planet.

It is clear that at a global level, human activity, increasing with population growth and consumption, is eroding the natural systems that our societies and economies depend on. This has led to a decline in biodiversity and the integrity of marine, terrestrial and freshwater ecosystems worldwide. A recent global assessment shows that: three-quarters of the world's land has been altered; growing cumulative environmental impacts affect two-thirds of our oceans; 85% of wetlands have been lost worldwide; and accelerating global species extinction rates are already tens to hundreds of times higher than the average rate during the last 10 million years. Ecosystem extent and condition have decreased by 47% from their natural baselines and 14 to 18 categories of ecosystem services have declined. The main causes of ecosystem degradation and biodiversity loss are changes to land-use and sea-use, exploitation and harvesting of organisms, climate change, pollution, and the spread of invasive, alien species [9], [10]. Since 1970, trends in agricultural production, fish harvest, bioenergy production and harvest of materials, e.g. wood, fibre, fuel, have increased [9], [10]. Human activities often cause slow, incremental and cumulative environmental degradation that goes unnoticed until it reaches a critical threshold, when the change becomes obvious and is much more costly to tackle, or irreversible [11].

Native species – species of organisms naturally occurring in an area but not limited to that area; they are naturally found elsewhere in the world as well. For example, Gentoo penguin or Striated caracara.

Endemic species – species that are naturally occurring and are ONLY found in that area. i.e. Falkland Islands endemics are found nowhere else in the world. For example, the Lady's slipper (*Calceolaria fothergillii*)

Exotic or introduced species – species that are introduced from outside the area; non-native species. For example, tomatoes.

Alien invasive species – species that are introduced from outside the area and that become problematic for the natural environment – spreading and reproducing with ease and invading (and usually disrupting) natural ecosystems to the detriment of native species, habitats and ecosystems. They also often have direct negative effects on humans by damaging property or agriculture. For example, earwigs or Calafate.

In the Falkland Islands, population and development levels are low, but there are still pressures on the natural environment such as farming, fishing, development, introduction and spread of invasive species, pollution, and climate change. Historical and current human activities have resulted in degradation and decline of some species, habitats and ecosystem types.

There are many opportunities to be explored to better manage our natural environment and protect and improve the prospects of our species, habitats, and ecosystems. Maintaining ecosystem integrity and resilience, in part through maintaining biodiversity, is key to supporting our wellbeing and the wellbeing of future generations. It should help to ensure that our natural environment continues to naturally clean our water, support our fish stocks, regenerate our soils, feed our livestock and be home to the incredible wildlife and ecosystems we want to enjoy long into our future.

[12]

Ecosystem services

These can be thought of as the contributions that nature makes to humanity. From a human perspective, they are what ecosystems provide to us. Ecosystem services can be divided into four different types:

- ***Provisioning Services:** the products we get from ecosystems like wood, fuel, fibre, fresh water and food.*
- ***Regulating Services:** ecosystems regulate the natural environment, e.g. taking chemicals out of the air or preventing soil erosion.*
- ***Cultural Services:** the non-material benefits we enjoy through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences, e.g. cultural heritage values, sense of place, ecotourism and recreation.*
- ***Supporting Services:** we usually don't notice these until they stop happening, but they are the services that keep ecosystems going and allow them to provide all the other types of services we enjoy, for example nutrient cycling, water cycling or soil formation.*

Issues and Opportunities:

- **Biodiversity loss is recognised as a global issue.** Threats to biodiversity and ecosystem integrity, such as development, resource extraction, land-use change, and invasive species, need to be managed to halt and reverse ecosystem degradation. More measures, e.g. establishment of protected areas, need to be implemented in the Falkland Islands to tackle these threats.
- **There is a need to integrate biodiversity and ecosystem health across environmental and economic agendas.** It is a global challenge to ensure that economic activities take biodiversity into account, and there is no “one size fits all” solution to this problem.
- **Cumulative, incremental environmental degradation is often slow and goes unnoticed** until it becomes severe and difficult, costly or impossible to reverse; e.g. biodiversity loss, invasive species spread. Creeping degradation of the environment is easier and more cost-effective to tackle early on, but requires early identification and action. Equally, improvements are often also incremental, and can take place slowly over long periods of time.
- **Connectivity is not always considered,** between marine ecosystems, marine-terrestrial connectivity or populations of species, for example, or factored into management and policy decisions.

7.2.Oceans and Coasts

As an island nation, oceans and coasts are vital to the Falkland Islands. We are surrounded by a vast ocean area, the Falklands Conservation Zone, which is teeming with life, from microscopic plankton to massive whales. It contains many different ecosystems and habitats including kelp forests, cold water corals, rocky reefs, maerl beds, and soft-bottom (sandy or muddy) habitats. Marine ecosystems form an important part of the Falklands' biodiversity; a great many of our species spend all or most of their lives in the ocean or along the shore, while others come into our waters or onto our shores to breed.

Our coastline covers rocky and sandy habitats that extend into terrestrial habitats like tussac or dune-slack blue-grass, and there are coastal cliffs, especially in the south-west [1]. In island environments, there is typically strong connectivity between marine and terrestrial ecosystems, and this connectivity should be borne in mind when reading this section and others, like land and freshwater.

Globally, marine ecosystems from the coast to the deep sea are affected by increasing human pressures and the cumulative impact of these, including ocean-acidification, climate change, fishing and pollution (see also Chapter 7.4 and 7.6). Our oceans can also be important carbon sinks, helping to mediate the effects of climate change. Marine ecosystems provide many important services, e.g. the provision of living resources like fish, nursery and feeding grounds for many species, climate regulation or the treatment and purification of waste.

Our oceans and coasts are a core part of the Falkland Islands economy; they provide the marine living resources that support our fisheries, the sea birds, marine mammals and associated species that tourists come to see, and the ports and shipping routes that connect us to the wider world. Our fisheries depend on healthy marine ecosystems and fish stocks. Globally around 33% of fish stocks are considered overexploited and there are many examples of stock collapses [10]. In the Falkland Islands, our marine ecosystems are in a comparatively good condition. The yields of some fished species have declined, but others remain stable or are increasing; one of our main fisheries is certified as sustainable by the Marine Stewardship Council. There remains a need to build on existing work, and there is ongoing policy development with respect to fisheries. There is also a small aquaculture sector and ongoing hydrocarbon exploration. Marine Spatial Planning began in the Falkland Islands in 2014 and has led to the identification of sites that could be protected as Marine Managed Areas; policy work is ongoing. It's key that we manage our marine environment in a sustainable way for the long-term prosperity of our Islands.

Issues and Opportunities:

- **There are multiple global human impacts on oceanic and coastal ecosystems**, e.g. ocean acidification from climate change, marine pollution, invasive species proliferation and pressure from fisheries. These have cumulative effects on marine ecosystems that threaten the vital social, economic and environmental services they provide and which require integrated ocean governance that spans geographic/political boundaries.
- **There are gaps in protection for marine and coastal ecosystems, habitats and seascapes in the Falkland Islands.** While many iconic species of wildlife are protected in the Falkland Islands and significant work has led to the identification of potential sites as Marine Managed Areas, there is a need to improve management of certain habitats, ecosystems or areas where

limited protections are currently in place, such as the inshore <3 nm from the territorial baseline where fishing cannot occur through powers of the Director of Natural Resources via fishing license conditions.

- **Sustainable management of the marine environment and its uses is a key issue in the Falkland Islands, as it is globally.** This includes ensuring ecosystem integrity and the continued provision of ecosystem goods and services. There remain challenges that will need to be addressed to enable sustainable management, including:
 - moving towards an ecosystem approach to fisheries
 - collecting additional scientific data on species and the natural environment to fill existing knowledge gaps and create a better understanding of marine ecosystems, including exploited offshore ecosystems
 - lack of regional fisheries management, which is important because ecosystems and biodiversity don't align with geographic and political boundaries
 - evaluating the environmental impacts of potential large-scale aquaculture
- **There are multiple uses of marine ecosystems** which can sometimes conflict with each other or, if not carefully managed, **collectively undermine ecosystem integrity**. It's important that human activities within these marine areas are carefully planned and zoned to ensure stewardship of our biodiversity and ecosystems, while allowing economic and social wellbeing. Marine Spatial Planning is one tool to address multiple use conflicts.
- **There are key knowledge gaps when it comes to the oceanic and coastal ecosystems of the Falkland Islands.** There has been significant research and knowledge accumulated on the marine environment and species. However, relatively unstudied ecosystems, environmental processes, areas, and species remain, especially below the high-water mark.
- **More understanding of marine invasive species in the Falkland Islands is needed**, including types present, and investigation of effective prevention and control measures.

7.3.Land and Freshwater

The Falkland Islands has a history of living close to the land, since the early gauchos and settlers farmed sheep and cattle. Agriculture, for food and fibre production, continues to be important culturally and for employment. Various terrestrial (land) and aquatic (freshwater) ecosystems comprise the 12,173 km² of land that make up the 780 islands and islets. Geographically, there are three main upland areas above 600 m. The deeply indented coastline forms sheltered inlets, and there are a great many wetlands and freshwater bodies dotted across the Islands, including coastal barrier ponds, oxbow ponds, glacial tarns, erosion hollows, and slump features in peat. The nineteen terrestrial habitat types include grassland, coastal tussac, fern beds, dwarf shrub heath, bogs, fen, marsh and swamp and montane habitats, among others [1], [3].

Terrestrial and aquatic ecosystems include many native species and provide a variety of ecosystem services; for example, they provide and purify freshwater, pollinate crops, provide food and wool, provide places for recreation, tourism and relaxation and purify our air. Ecosystems like wetlands and peatlands – important habitat types in the Falkland Islands – play an important role in climate regulation by trapping and storing carbon dioxide (greenhouse gases) from the atmosphere and helping to offset climate change. The functioning of these ecosystems supports our society and

economy. For example, ecosystems support agriculture, native vegetative cover helps retain soil and prevent erosion, and functional ecosystems naturally cycle nutrients that are essential to growing plants that we, or livestock, eat.

But as much as we rely on ecosystems for supporting us, we also compete with ecosystems for resources like space and freshwater. Most of our native terrestrial ecosystems in the Falkland Islands have been modified by agriculture and other human activities, and the introduction of invasive species. Certain habitat types are thought to have declined in extent or quality. This is also a global problem; land-use change driven by agriculture and urbanisation drives ecosystem change and loss, with nearly a third of the world's land surface and 75% of all freshwater resources used in crop and livestock production. While urbanisation is almost non-existent in the Falkland Islands, much of our land is under livestock agricultural production. We also depend on freshwater for human consumption and various industries. The effects of climate change will compound problems for ecosystems in many areas. This should concern us because, beyond the loss of unique and irreplaceable species and habitats, degraded ecosystems provide fewer or lower quality services to us and we may see this in polluted water, disrupted water cycles, changes in rainfall or soil moisture, erosion of land, the loss of certain habitat types or soil fertility, and so on. This paradox – that we need to use nature to live and provide our incomes but we also depend on it – is one that all countries face and we are no exception.

Until the 1970s, almost all of the Falkland Islands, including small, adjacent offshore islands, was grazed. This significantly impacted land and freshwater habitats, though the extent of impacts is unknown. Livestock agriculture continues to be an important livelihood and way of life for many Falkland Islanders, with most land still farmed. Tourism is also of growing importance as an alternative industry, with domestic and international tourists visiting different locations around the Falkland Islands to enjoy the native wildlife and the outdoors. Like all human activities, tourism also has impacts on ecosystems (see also Chapter 7.7), and depends on the provision of ecosystem services like fresh water. It's therefore important that these human activities are managed and that our land and freshwater environments that provide the ecosystem services are cared for. In other words, that we find a way to continue to live with and from the land while keeping nature healthy and being good custodians of our land and freshwater for future generations.

Issues and Opportunities:

- **More measures are needed to manage ecosystems on land and in freshwater, including protections, restoration, and prevention of degradation.**
- **There is limited baseline knowledge (i.e. key knowledge gaps) for aquatic and, to a lesser extent, terrestrial ecosystems in the Falkland Islands.** Improved understanding of these ecosystems, and the threats facing them is needed to underpin efforts to manage, protect, maintain, and restore them in a systematic, evidence-based way. Improved evidence will aid decision-making and help prioritise areas for action and direct resources effectively.
- **Improved land-water management and planning is needed,** taking a forward-looking, ecosystem-based approach which is sensitive to the needs of the environment – considering ecological effects and long timescales, whilst also catering to the wellbeing of the population.

For instance, considering water retention and availability, investigating the re-use of grey-water, or alternative means of acquiring and managing water.

- **The reasons for success or failure of past management actions, including restoration, are not always understood.** For example, in the case of restoration a number of factors may have been at play including different restoration methods, plant types used, some areas being more or less amenable to restoration, or the long time-scales for successful restoration.
- **Conflicting or competing demands can often arise between agricultural/land management practices and environmental measures, especially in the short-term.** Agricultural practices have a huge impact on our environment. Equally, the long-term sustainability of agriculture is dependent on healthy ecosystems.
- **Environmental and ecological considerations could be further incorporated into agricultural advice.** Finding ways to maintain a sustainable income from farming while considering and managing environmental impacts and the ecological underpinnings of agricultural production is a key challenge, and the information available to farmers should reflect this.
- **Land valuation** does not explicitly take account of biodiversity, ecosystem integrity, environmental variables and the variation in the quality of the land on the basis of past management.
- **Land degradation.** Erosion and smothering, diminishing soil quality, and vegetation changes are all apparent and are thought to be caused by a mixture of historical land management practices and the fact of our existing climate, as well as climate change.
- **Terrestrial invasive species and biosecurity.** Whilst successful work is already underway, there are continuing risks from new introductions and the spread of already introduced species, particularly to invasive-free islands, which should be controlled. There are also opportunities to increase awareness in the community and encourage individual action.
- **Land appears to be drying out and rainfall patterns appear to be changing.** This is a potential threat to aquatic ecosystems, and could exacerbate problems in terrestrial ecosystems, with increased competition between ecological and human demands for water. Further data are needed to understand this issue.
- **Wildfires.** Increased ecological understanding would be beneficial. There are limited options to manage wildfires in Camp and the Outer Islands, which can damage and destroy land to the detriment of agriculture and the environment, e.g. releasing large carbon stores into the atmosphere through burning of peat.
- **Much (approximately three quarters) of the land in the Falkland Islands is under private ownership,** so measures to manage, improve or protect land should be suitable to be taken up and implemented by private individuals.
- **There are practical challenges to implementing measures to manage the environment.** Scale can be an issue. There are limited resources (e.g. funding, labour, equipment, seedlings) and time for implementation – particularly on farms, where there are often only a handful of people caring for very large areas with an average of 2.6 persons per farm and an average farm size of around 10,000 ha.

7.4.Climate Change

Over the past few centuries as society has industrialised, human activity like the burning of fossil fuels, land-use change and intensified agriculture have released large quantities of greenhouse gases (e.g. carbon dioxide or methane) into the atmosphere. At the same time large-scale land-use change and deforestation has reduced the ability of the natural environment to take up and store these gases. This has meant rising levels of greenhouse gases that have and will continue to warm the atmosphere and result in large-scale changes in climate – e.g. changes in rainfall and meteorological patterns, increased severity and frequency of extreme weather events in some areas (e.g. hurricanes or tropical storms) – and changes in ecosystems. Warming is causing glaciers and the polar ice caps to melt and, in turn, sea levels to rise. Elevated levels of carbon dioxide gas in the atmosphere means more carbon dioxide dissolves in the oceans and leads to seawater becoming more acidic, a phenomenon known as ocean acidification. Ocean acidification causes changes to marine ecosystems, affecting phytoplankton (small, photosynthetic organisms), the physiology of many species, and makes it difficult for many marine organisms to build their calcium carbonate shells or structures.

Studies in the Falkland Islands have suggested that climate change is likely to have a multitude of effects on our ecosystems. Soils are likely to dry out and lose carbon content, with potential impacts on soil health. There is an increased risk of fires, especially in habitats like dwarf shrub heath, tussac and bogged acid grassland that are dry and flammable. Certain species, particularly those near the edge of their range, may be at risk due to changes in climate that mean the local conditions will no longer be suitable to their physiology. Climate change may also worsen the impact of invasive species and pests, by creating more suitable climate conditions for them [13]. There is less information on the potential effects of climate change for the marine environments of the Falkland Islands, but based on changes and studies from elsewhere these are likely to include changes to food-webs and species distributions, ecosystem level shifts and potential loss of species. Changes for land, freshwater and marine systems are likely to be significant for the economic activities, like fisheries and agriculture, that they support.

We all contribute to climate change by using fuel to power our vehicles and electricity in our homes, through our agricultural and other practices. The Falkland Islands makes a globally small contribution to greenhouse gas emissions, although we still give consideration to this (see also Chapter 7.5). However, we also have a number of ecosystems like peatlands, wetlands and kelp forests that are known to store carbon, removing it from the atmosphere and helping to counteract climate change. Globally, marine and terrestrial ecosystems are the main sinks for carbon, sequestering 5.6 gigatons of carbon per year or around 60% of humanity's global emissions [9]; for example, the Falkland Islands kelp forests have been estimated to sequester around 299,000 tonnes of carbon dioxide a year [14].

Issues and Opportunities:

- **We have already begun to experience some of the negative effects of climate change and there is the growing potential that climate change will further affect our environment and economy.**

- **Globally the effects of climate change are known to interact with other human activities** and lead to more severe impacts on the environment. This process, which is likely to also have an impact in the Falkland Islands, can accelerate environmental degradation and other issues.
- **We will need to adapt to and mitigate climate change and its impacts**, including planning to cope with some of the above effects and their secondary consequences for the Falkland Islands environment, society and economy.
- **There is a level of unavoidable uncertainty about climate change and its effects.** At the same time, there is scope to understand more, and model what the impacts could be in the Falkland Islands.
- **We have limited meteorological data and there is a need for increased long-term climate data (spatially) across the Islands.**
- **Adaptation and mitigation measures, when scaled up, may have unintended consequences;** e.g. large-scale wind farms could disrupt migratory behaviour of birds. The potential negative side-effects of mitigation and adaptation measures should be assessed and minimised or avoided – however some trade-offs are likely to be necessary.
- **Evidence of the real potential of offsetting is needed.** It may be possible to offset greenhouse gas emissions in the Falkland Islands through our natural environments to help mitigate climate change at a global level. We need a better understanding of the feasibility of this option, what the outcomes might be, and how it could work in practice.

7.5. Energy and Non-renewable Resources

This theme relates to energy - including the generation and use of electricity, heat and transportation – and to the extraction (for export) and use of non-renewable resources (e.g. hydrocarbons) in the Falkland Islands. The generation of energy impacts the environment in a number of ways, including through the creation of emissions, such as air pollutants and greenhouse gases (mainly carbon dioxide) from the burning of fuels, or through their construction, operation and end-of-life, e.g. waste from solar panels or batteries (see also Chapter 7.4 and 7.6). Renewable energy sources are generally considered better for the environment as, unlike fossil fuels, during their operation they do not create emissions such as greenhouse gases that cause global climate change, or air pollutants like particulate matter or oxides of sulphur that are linked to respiratory health issues. Although, they also have environmental impacts, e.g. wind turbines can create a risk for birds.

***Resources** are natural assets (raw materials) that are found in nature and can be used for economic production and consumption.*

***Non-renewable resources** are natural resources that are not replenished in time frames relevant to human planning. This means that they typically get ‘used up’. For example, coal, oil or ore-bearing rocks.*

***Renewable resources** are natural resources that are replaced in time frames that are relevant to human planning; e.g. fish or trees. These kinds of resources are mainly considered in sections 7.1-7.3.*

The Falkland Islands currently produces its electricity from a mix of fossil fuels (diesel generators) and renewable energy. Wind is the main renewable source of energy, but solar is also used to a lesser extent.

Renewable energy refers to the production of energy from sources that are not used up in the process. For example, solar energy, wind energy, wave energy.

Transportation on land primarily uses diesel vehicles that have off-road capabilities and can cope with gravel roads and difficult terrain; although private companies are beginning to import and explore the use of electric vehicles.

Currently, 30% of Stanley's energy is renewable and more than 90% of farms in Camp generate electricity from renewable sources. Transition to more renewable forms of heat energy continues to be incentivised through grant schemes administered by the Falkland Islands Development Corporation. However, we still rely on diesel generators for primary power to meet Stanley's energy needs and for back-up power in Camp. Back-up power and redundancies in the renewable energy systems at a national level are necessary for energy security. Because of our remote location, we generate all of our own energy. As a result, energy security is a key consideration and any energy sources need to be reliable to ensure that we can continue to power day-to-day life, including key services like the hospital, food storage, or communications. There are challenges in relation to being reliant on a single renewable energy source; around 20% of the year wind-speeds are either too low or too high to produce wind energy. Similarly, apart from every night, there are periods of time when solar energy production dips (e.g. during winter). These peaks and troughs in renewable energy production don't coincide with energy demand. Additionally, during periods of low demand excess renewable energy is currently not fully captured. This means expansion into renewables will require additional investment in storage technology.

From an extraction point of view, the Falkland Islands has offshore hydrocarbon resources, with significant potential for development and exploitation. The current legislative framework is being enhanced to reflect international best practice and to have a modern and robust environmental and safety regulatory regime. Mitigation and offsetting are also anticipated to be an important part of respecting the natural environment. Considerations around this, has led to the development of an Environment Trust to deliver offsetting projects, although such opportunities are in their infancy, and globally, offsetting schemes have a number of barriers to success.

We also extract other non-renewable resources on a small-scale, including small quarries for road building and maintenance, calcified seaweed for agricultural purposes, and traditional peat-cutting for heating and cooking (a cultural, but no longer wide-scale practice).

Issues and Opportunities:

- **Continuing to rely on and invest in non-renewable energy sources for power generation will mean that we continue to emit greenhouse gases, which although fairly small because of the size of our population, still contribute to climate change.** Burning of fossil fuels is also associated with emissions of air pollutants.
- **There is an opportunity for increased use of renewable energy sources, which are not currently exploited as far as they could be for heat and electricity generation.** Transitioning to renewable energy sources has additional benefits beyond reducing greenhouse gas

emissions, including enhanced energy security (reduced dependence on fuel imports) and less air pollution.

- **Energy demand will continue to increase** with growing population and economic growth. There are peaks and troughs in demand over short time-periods, necessitating consideration of energy storage and redundancies.
- **It's important to consider multiple renewable energy sources** in ensuring energy security for the Falkland Islands, to enable us to no longer rely on fossil fuels.
- **There are key challenges, some unique to the Falkland Islands, that will need to be overcome to achieving 100% renewable.** Getting reactive power from renewable energy is complex and requires additional technology that is becoming available but is not yet proven. The main reactive power demands are from sources such as quarry and refrigeration related to transport logistics (e.g. reefer containers).
- **The whole of life impacts and functionality for any energy source and installation need to be considered,** taking into the account long-term environmental impacts of construction, operation and waste. This should be planned for, mitigated and managed, all of which can be challenging due to the location and remoteness of the Islands.
- **Bearing in mind these challenges, the emphasis on energy efficiency and savings could be increased, in order to reduce energy usage.** For example, better use could be made of energy efficiency measures in new and existing buildings.
- **Not much use is currently made of green transportation options in the Falkland Islands.** Transitioning to green transportation options, e.g. electric vehicles will require understanding of consequences in terms of future electricity demands from the grid, new charging infrastructure and potential new waste streams generated by new technologies.
- **Many environmental protections are already in place for managing extraction of hydrocarbons;** however, careful consideration also needs to be given to decisions around extraction of non-renewable resources on land, and to managing and mitigating potential environmental impacts.
- **International trends, developments, and supply chain considerations, may dictate the cost, availability, and suitability of energy sources for the Falkland Islands.**

7.6.Waste and Pollution

Pollution to air, water and soil results from human activities such as: burning of fuels; production of waste water; discard of waste like plastics, cars and electronics; by-products of industry; or the use of chemicals and fertilisers. Pollution is a driver of environmental change and a global problem, not least because we share the earth's atmosphere and oceans. At a global level, pollution is an important cause of biodiversity loss through strong negative effects on soil, freshwater and marine quality, as well as the global atmosphere [9], [10], and it has serious impacts on human

Pollution – the direct or indirect introduction of substances, vibrations, heat or noise into air, water or land, as a result of human activity and which may be harmful to human health/the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment.

health. However, appropriate pollution control and prevention technologies can minimise and mitigate the impact of pollution.

Because of our small, remote population and low level of industry, the level of waste and pollution that we generate is comparatively small – a trend we should seek to continue in future. However, our size and location also pose a number of specific challenges with respect to waste and pollution.

Global trends affect the Falkland Islands. Waste washes up on our shores, much of it not generated by us. We are reliant on external supply chains and on global market trends in terms of products and packaging. We have choices in terms of what we buy, but these can be limited, and not always straightforward. For example, less packaging may cut down waste, but could also mean reduced shelf-life or increased chance of spoilage or damage on a long journey, paradoxically leading to more waste. There can also be challenges related to the minimum quantities of waste needed to be shipped for recycling or appropriate means of disposal, and the significant carbon footprint and cost of shipping waste over large distances. The small population size and volumes of waste we generate make it uneconomical to recycle some types of waste locally. The increased use of smartphones, computers and electronic devices in day-to-day life generates e-waste (discarded electronic equipment that contains toxic elements), but we do not have the facilities to appropriately recycle this.

As technology continues to advance, the Falkland Islands population and economy grow, and new industries develop, we need to introduce additional ways to manage and control pollution, and there is ongoing policy and infrastructure development related to this [15]. To this end, there has been joint working between FIG and BFSAI on sustainability issues related to waste and pollution. BFSAI are an important part of the Falkland Islands community and are working collaboratively on recycling and waste management initiatives with FIG and looking for ways to build on the many benefits realised so far for people living and working within the Falkland Islands.

Issues and Opportunities:

- **While a number of controls and mechanisms are in place to manage pollution in our oceans, particularly offshore, controls on pollution on land are more limited.** This relates to managing all types of emissions across air, water and land.
- **Domestic and commercial waste could be better managed, including biological, chemical, sewerage and municipal solid waste.** Opportunities should be explored around increasing recycling, decreasing consumption, and better handling and disposing of hazardous waste, non-hazardous waste, and wastewater.
- **Opportunities may exist around the use, re-use and repurposing of waste.** For example, extracting energy from waste, recycling metal waste, or using food waste streams from industry for some other purpose.
- **We could all take more responsibility for what we consume.** Pollution and waste, as much as it is a national problem, is also one that is determined at the individual level, through our choices of what and how much we buy and discard. Although supply chains in the Falkland Islands may limit options, opportunities do exist to reduce waste through changes in consumption.
- **Hazardous waste and e-waste, a modern global issue, pose environmental and human health risks.** E-waste, generated from the disposal of electronics like mobile phones or the

batteries of hybrid cars, often contains toxic substances. The problem is only likely to grow in future as technology becomes more widespread. However, the rare elements in some of these electronics have a value when recycled.

7.7.Sustainable Development and Quality of Life

A sustainable economy and our wellbeing are underpinned by healthy, functioning ecosystems. Ecosystems play an indispensable role in cleaning our air and water, regulating climate, producing food, providing energy and key materials, genetic resources, pollination, pest control and medicines. They are essential for our quality of life, health, physical wellbeing, culture, and identity, and provide inspiration, learning, and recreation (see also Chapter 7.1). Our connection to the natural environment is perhaps more obvious in the Falkland Islands where we live close to our natural environment and have a resource-driven economy; our fisheries and agriculture are both dependent on the sustainable management of our natural environment and tourism is focused around wildlife.

The Falkland Islands enjoys a prosperous economy and good quality of life, where large quantities of natural resources and a small population have led to full employment, relatively high incomes and a good range of local government services. The fishing industry is the cornerstone of our economy, with agriculture and tourism making smaller contributions to income but being important employers. The public sector is also a key employer. Hydrocarbon exploration is ongoing, with the intention to progress to production should it prove feasible, and there is currently a small aquaculture sector and potential commercial interest in expanding this. In short, we have a resource-based economy. The fact that our industries depend heavily on the natural environment and are affected by changes in the environment also has significant implications for financial risk to the economy. Global climate change, and the increase in environmental uncertainty it brings, has the potential to further intensify this.

Overall, it has been recognised that we have a narrow economic base and that we will need to diversify and differentiate our economy in strategic ways to ensure long-term prosperity, by increasing economic resilience where international markets or natural environments change or fluctuate [5], [16]. The key challenge, then, will be in achieving this diversification and differentiation and managing our existing activities and development to allow a good quality of life, while not undermining our ecosystems and the services that they provide or the aspects of our community, heritage and way of life that we value.

Human activities and development can transform and degrade ecosystems and reduce their ability to function and continue to provide the ecosystem services that support human wellbeing. Interactions are complex. Economic activities impact local quality of life, often in both positive and negative ways that operate through the environment. For example, high levels of tourists bring economic advantages and may support increased transport links, but may also cause crowding out of local environmental areas, limiting public access to the natural environment. Economic development, at a global level, can bring advancement that provides more environmentally-friendly options for technology or methods and it is worth taking advantage of these, where possible, to lower the impact of these activities.

Our quality of life is also linked to culture, history, and heritage, and for the Falkland Islands these are closely tied to the environment. The natural environment is a strong part of our national identity and public consultation has shown that we value things like the sense of space, freedom and proximity to

wildlife. Human health also depends on the services that ecosystems provide and is linked to environmental health. This operates in various ways from the impacts of pollution to pathogens and pests, which are natural parts of ecosystems. For example, environmental degradation and climate change can alter the frequencies of pests and diseases. The natural environment is also important for our mental health and wellbeing, with studies increasingly showing that spending time in nature has a multitude of benefits for our physical and mental health [8].

Issues and Opportunities:

- **Economic activity and development need to be carried out within ecological boundaries.** Exceeding the limits of what the environment can support undermines the ability of ecosystems to continue to produce these goods and services. The overall integrity of our ecosystems and their functions underpin much of our economy, and the renewable resources that we rely on need to be sustainably managed to ensure long-term viability.
- **As the population of the Islands continues to grow and we continue to develop, our environmental impact and risks to the environment are likely to grow.** We need to understand and consider the environmental, social and economic trade-offs of this growth.
- **The potential impacts of development and human activities, which act through the environment, on quality of life and health should be considered.** For example, chemicals used in managing pests or invasive species, or even for enhancing agriculture, may have unintended consequences for human and environmental health.
- **The interactions between industries, the environment, and the economy are complex.** The impact of one industry on the environment can, in turn, impact another industry that relies on the ecosystem goods and services healthy ecosystems provide. Related to this is the issue of cumulative environmental impacts of economic activities and developments.
- **The challenge is in balancing environmental measures in existing and future economic activities to ensure that ecosystem integrity (and biodiversity) is not undermined** and that environments are appropriately protected and preserved while still allowing economic activity and growth that enables a good quality of life and the wellbeing of our community. It is important to appropriately evaluate, manage and mitigate the environmental impacts.
- **There is often a mismatch between the timescales at which ecological change and processes operate and typical financial cycles.** Whilst ecological processes frequently operate on long timescales and environmental changes are often incremental, financial decision-making tends to operate on a much shorter timescale.
- **The natural environment is variable by nature, and there is a high degree of uncertainty in estimating many environmental processes.** This has significant consequences for Falkland Islands industries, e.g. fishing, farming, tourism, that depend on, and are affected by, changes in the natural environment.
- **The Falkland Islands identity is tied closely to the environment;** however, there remains the challenge of balancing the preservation of cultural heritage, community attributes and way of life with environmental protections.
- **Opportunities exist around improving quality of life and health through increased use and enjoyment of the environment,** e.g. encouraging use of outdoor spaces and accessibility to natural areas like the Common or increased access to other areas. The natural environment plays an important part in our happiness, quality of life and health.

- **There is a lack of data to explore links between environment and human health in the Falkland Islands.**
- **At a global level food security and food safety are an issue**, with climate change, degradation of agricultural land and land conversion for biofuel or energy production being identified as threatening food security, especially in poorer countries. While we are rich in natural resources, we are heavily dependent on imports and supply chains, including many food stuffs, making us subject to international trends.

7.8.Science and Innovation

This section focuses on the importance of science to advance our understanding of the natural environment and the drivers of change. It also looks at using the information and data we have or collect, in ways that can inform our actions to manage the environment and support efforts to develop and adopt innovative technologies and approaches for sustainable development and improved environmental management. Science and technology are powerful agents of change and, depending on how they are directed, can achieve positive progress towards sustainable development [17].

There have been a number of ongoing science initiatives in the Falkland Islands for land, air and sea, both within government and across partners. Research undertaken by government, the South Atlantic Environmental Research Institute, Falklands Conservation, the British Antarctic Survey and other national and international partners benefits not just the Falklands, but also contributes to the global understanding of some of the major challenges facing the planet, most notably those related to climate change. There is the intention to build on our scientific capacity, and that of the region, and to find ways of adopting technologies and approaches to better understand and manage our natural environment. The Falkland Islands provides the international science community with a platform to monitor and observe climate change; not just in the Islands and our waters, but across Antarctica and South America. As well as acting as a scientific hub and research coordinator/leader in the South Atlantic, the Falkland Islands is a gateway to the Antarctic for science and research.

Innovation is about finding new and creative ways of solving existing problems or taking advantage of opportunities. The people of the Falkland Islands have a history of finding creative ways of solving local problems with limited resources. Globally, innovation, especially in the technological and data management sectors, is progressing rapidly and there are opportunities that can be explored for whether and how this could be applied locally to help protect, improve and monitor the environment. Innovative technologies and approaches could also help the Falkland Islands move to more sustainable practices and options (e.g. green energy and innovations around this, better systems of food production, economic development and new economies, new ways to deal with waste or re-use it). Internationally, more and more governments and companies are investing in sustainable technologies [17]. It's important to look at what works elsewhere and what doesn't, and how that can be applied in the very specific context of the Falkland Islands. This constitutes horizon-scanning, but also is about looking to the future and understanding how we can develop local practices and technologies to be prepared for global advances that are progressing at pace.

Useful and accessible information, including data, help to support science and innovation, as well as decision-making. For the size of the population and the resources of the Islands there has been a relative wealth of science and research; nevertheless, data are often limited in the Islands and information can be somewhat patchy. There has been some work on consolidating metadata and environmental records through the SAERI IMS-GIS centre. There is a broad need for improved information management across and beyond government, particularly for environmental data, where having more baseline information can help to identify early warning signals of environmental change and help provide an evidence base to inform decision-making. This goes beyond data management, and extends into understanding the records and information we have. Understanding what we have will enable us to make better decisions in terms of what we need to do and data we need to collect, and avoid doubling back on work and wasting resources that could be better spent elsewhere.

Indeed, there are global trends to build science-policy-society cooperation that can make use of developments in our understanding of human-environment systems and in creating innovative pathways towards sustainable development; many countries are strengthening science, technology and innovation aspects of their national development agendas [17].

Issues and Opportunities:

- **There is an opportunity for better management and sharing of research, knowledge and data across the Islands.** Currently, environmental data and information are generated across disparate sectors (government, industry, non-governmental organisations) and use different practices. They are not always easily accessible. This means that work is repeated, wasting resources, and valuable information that could improve decisions or actions is not utilised.
- **There is a need for better baseline environmental data and long-term monitoring, which can be important for understanding trends.** Early warning monitoring systems can help to spot slow, incremental degradation of the environment before changes become irreversible.
- **There is a need for the establishment and prioritisation of key performance indicators and associated data collection across the suite of themes discussed in this strategy.**
- **The way that science interacts with policy and decision-making needs to be improved,** such that the available science and evidence base informs direction and decision-making.
- **There could be more horizon-scanning and future-proofing, with the aim of understanding global trends and where they could be applied successfully to the Falkland Islands environment.** New technologies and practices may be beneficial for the environment, and bring advantages more broadly across our society. Our size means that while scale may make some initiatives unfeasible, we can be nimble and adaptive – adopting changes relatively quickly.
- **Innovation may provide new and useful solutions to existing problems, but not all change and innovation is automatically good or needed.** We will need to be critical about what would work in our local context and what the environmental (or other) consequences may be.
- **There can be resistance to change and new ideas – particularly where these are not tailored for the Falkland Islands context.** Change and innovation can be challenging and often requires careful communication and consideration about how changes are adopted.

- **Research and skills development will be needed to support science and innovation, including that which will be required to adapt to global changes and shift to a greener economy.** This is particularly relevant in pre-empting emerging technologies that will eventually be taken up on the Islands.

7.9. Communication and Education

Education and communication both have a prominent role to play in helping people to understand the environment and to engage in the process of delivering and supporting meaningful change. Education can provide a better awareness of a variety of ecological issues. Everyone in society, at any age, can increase their understanding of the environment and use this information to modify their behaviours and their interactions with ecosystems around them in a sustainable way.

In the Falkland Islands, we encourage an ethos of ‘lifelong learning’, combining traditional education pathways with modern learning opportunities. By supporting this ongoing, voluntary and self-motivated approach to personal development, there is a clear and obvious framework for improving environmental knowledge and understanding across the whole of the community. This in turn helps everyone to become aware of the solutions to environmental issues, and motivates people to tackle the problems and act to both preserve and conserve natural resources.

In addition to environmental education strategies, effective behavioural change can also be brought about when people lead by example and when there is direct and collaborative action, and this is where communication is absolutely vital. Environment is understood in a different manner by people based on their experience, education and the level of overall awareness in society – communication can bridge the gap between these three pillars. Environmental communication should cater for all generations and across the whole of the community and should support a range of environmental efforts – policies, strategies, programmes and projects – including changes in knowledge, approach and behaviours. It should cross-cut different realms, areas of study and socially responsible practices, from risk management to scientific research, from social media and marketing to political action. Every message generated should be able to transcend barriers between different segments of society, as well as organisational boundaries and silos. Environmental communication supports collective ownership and is an important tool for helping to achieve policy objectives.

Issues and Opportunities:

- **Knowledge, data and information related to the environment could be better communicated** in an accessible and consistent way and shared throughout the community so that people are well informed.
- **Environmental stewardship throughout the community and industry could be encouraged** through increased communication, education and programmes/initiatives. This includes encouraging corporate and social responsibility.
- **The Falkland Islands community could be further enabled to consider the environment in day-to-day activities and to implement more environmentally-friendly practices**, which would help to support policy and legislative implementation. Regulations alone do not achieve

environmental change; it requires an attitude shift as well as the mechanisms and tools in place to help people make changes.

- We need to **explore new capabilities**, including job skills, environmental careers, ways of learning, research efforts and management approaches to adapt to global change and make the most of opportunities in the Falkland Islands to work towards a greener economy.

8. STRATEGIC OBJECTIVES & ACTIONS

This section details our strategic objectives to help guide us in working towards our vision. It also provides an example of *some* of the actions we'll be taking during the life of the strategy. Further actions, and indeed many of the smaller steps involved in the actions already listed in this strategy will be developed, prioritised and implemented through the mechanisms explained in *the Strategy in Practice* (Chapter 6) to address issues and strategic objectives. The *Strategy in Practice* also deals with how conflicts between objectives or actions and prioritisation of limited resources will be handled.

8.1. Biodiversity and Ecosystem Integrity

- to continue working towards integrating biodiversity (i.e. considerations of ecosystem integrity) across environmental and economic agendas, acknowledging that the integrity of ecosystems underpins the continued provision of all ecosystem goods and services for current and future generations
- to protect and enhance our biodiversity (ecosystem integrity), reducing its loss through tackling threats
- to work towards preventing the introduction of invasive species, reducing their spread and reducing, eliminating or appropriately managing them
- to mitigate for degradation and promote restoration of native ecosystems, where possible
- to work towards understanding and managing creeping change (slow, incremental environmental degradation) before environmental thresholds are passed that have costlier and fewer solutions
- to increase knowledge of the marine, terrestrial and aquatic environments and biodiversity, through identifying and filling key knowledge gaps, to support effective governance and decision-making

Actions we plan to take include:

- update our biodiversity framework and action plans to accommodate upcoming changes to the international Convention on Biological Diversity
- update wildlife and nature legislation to increase protections for biodiversity
- implement more controls on invasive species
- Identify and prioritise data types and key geographic areas for data collection to increase our knowledge of marine, terrestrial and aquatic environments

8.2. Oceans and Coasts

- to have healthy, functioning and robust marine and coastal ecosystems in the Falkland Islands through protections and management

- to ensure that future generations can benefit from marine and coastal ecosystems and the goods and services they provide by sustainably managing human activities which impact our oceans and coasts
- to actively participate in the integrated, cross-boundary management of marine ecosystems in the South West Atlantic, that considers cumulative impacts and contributes to the good condition of marine and coastal ecosystems

Actions we plan to take include:

- establish marine managed areas with a target of 15% of our marine waters designated and with management plans
- continue working with countries in the broader region to share information and resources to facilitate better management of our marine environment
- conclude investigations of potential environmental impacts of aquaculture, including large-scale aquaculture
- implement the agreed recommendations from the fin-fish review (ExCo 16/21)
- investigate extension of appropriate international instruments to reduce introduction of marine invasive species

8.3.Land and Freshwater

- to manage and protect our native terrestrial and aquatic ecosystems (including wetlands) and the quality of land and water
- to improve terrestrial and aquatic ecosystem integrity, for the benefit of current and future generations, through considering the ecological impact of and improving land-management approaches, practices and incentivisation
- to take an integrated land-water management approach that adopts a long-term view and incorporates ecological considerations alongside social and economic ones

Actions we plan to take include:

- establish additional National Nature Reserves
- create an agricultural action plan and an agricultural advice framework, which will reflect the ecological principles in the Environment Strategy
- develop an action plan to manage land and water
- investigate the potential for peatland restoration and frameworks around restoration
- assess successes of previous restoration efforts to build better knowledge for future efforts
- develop a clear biosecurity policy
- increase community awareness of invasive species, how and why they should be managed

8.4.Climate Change

- to reduce our carbon emissions through transitioning to using renewable (low carbon) energy sources for power generation
- to consider and plan for the possible extent of the multiple effects of climate change for our ecosystems, society and economy and how these may interact with other human impacts
- to understand the potential of native ecosystems for mitigating and offsetting carbon emissions, e.g. peatlands, wetlands and marine ecosystems
- to consider the potential negative environmental effects of climate change mitigation and adaptation measures

Actions we plan to take include:

- produce a climate change adaptation and mitigation plan for the Falkland Islands
- assess the suite of potential risks of climate change for the Islands to inform policy
- increase our understanding of how climate change could impact our species and ecosystems, particularly those that also experience effects of commercial exploitation
- increase our understanding of climate change impacts on fisheries through scientific studies
- investigate carbon accounting for the Falkland Islands to understand our current net carbon emissions and to help us set targets around carbon neutrality

8.5.Energy and Non-renewable Resources

- to increase our use of renewable energy sources, with a focus on reliable and appropriate energy with low environmental impacts
- to promote energy efficiency and savings, slowing down and stabilising the consumption of energy while ensuring that the needs of people are met
- to consider whole of life impacts of measures intended to reduce energy use or of transitioning to renewable forms of energy
- to conduct the extraction of non-renewable resources, including any hydrocarbon development, in a way that values and conserves our unique biodiversity and ecology, supported by effective regulation

Actions we plan to take include:

- produce and implement a new Energy Strategy for the Falkland Islands
- increase our reliance on renewable energy, with Stanley's primary electrical supply being 100% renewable by 2050
- build on existing schemes to increase domestic insulation, thereby reducing their energy consumption
- trial alternative renewable technologies for Stanley's electricity supply, such as solar energy
- increase energy saving practices within FIG
- trial the use of electric vehicles

- promote and encourage investment in the Falkland Islands Environment Trust and support projects funded by that Trust

8.6.Waste and Pollution

- to improve pollution controls in the Falkland Islands, with a particular focus for onshore pollution controls
- to improve waste management in the Falkland Islands, including sewerage, hazardous and e-waste, to reduce impact on the environment
- to use resources efficiently, keeping them in use for as long as possible to reduce waste and its environmental impacts through the promotion of re-use, remanufacturing and recycling
- to promote changes in behaviour, including consumption patterns, to reduce waste and pollution

Actions we plan to take include:

- create a Waste Management Plan to implement for the Falkland Islands
- develop a policy framework and identify and implement appropriate tools (e.g. legislation) to control and prevent pollution
- create a protocol for dealing with terrestrial fuel spills
- decommission and replace current power station in order to reduce polluting emissions
- in partnership with BFSAI, create a waste management facility and a new landfill designed and built to high specifications by 2025 to minimise environmental impact
- reduce waste to landfill through ongoing recycling, repurposing and other waste management practices
- explore options for additional sewerage treatment to improve quality of effluent
- establish a list of hazardous substances and products typically disposed of in the Falkland Islands, including e-waste, batteries and agricultural chemicals, and identify options for appropriate disposal or recycling e.g. export supply chains
- work with industry and business to source more sustainable, lower waste product options and encourage them to explore viable options for tackling waste streams from existing economic activities
- investigate extension of appropriate international instruments to reduce marine pollution

8.7.Sustainable Development and Quality of Life

- to have development that is sustainable, within ecologically meaningful boundaries, so that the natural environments on which we ultimately depend are not undermined
- to manage and protect our heritage - natural, geological and cultural, our sense of wild places, open skies and small community spirit

- to consider, manage and minimise the impact of economic activities and development on the environment, taking a long-term strategic approach that considers future generations and incorporates environmental assessment
- to consider the strong links between natural environment and human health when making decisions and policies, recognising that an impact on environmental health frequently translates to an impact on human health

Actions we plan to take include:

- improve environmental assessment frameworks for land-based development
- continue to promote and improve environmental standards for new builds
- encourage the adoption of environmentally-friendly measures, e.g. energy savings, water savings and thermal efficiency, through educational advice provided with building permit applications
- explore management plans for tourist industry in environmentally sensitive areas
- explore concept of eco-certification for Falkland Islands tourist industry
- promoting high-value, low-environmental impact tourism
- further develop self-guided nature walks with partners to promote physical and mental well-being
- continue to implement the Stanley Common Management Plan and undertake ongoing policy development for the Common as appropriate to its importance as an open space for the public and National Nature Reserve

8.8.Science and Innovation

- to create a strong, well-managed and accessible science and evidence-base to help support decision-making with respect to the environment, including for helping to cope with and adapt to environmental change
- to help facilitate science, research and the development or implementation of new technologies, methods or approaches
- to have a strong and responsible culture of innovation across the Falkland Islands; engaging in horizon-scanning and investigating the potential environmental benefits and impacts of new technologies, industries and practices
- to continue to develop skills to enable innovation and research, e.g. STEM (Science, Technology, Engineering and Mathematics), for the Falkland Islands
- to future-proof technologies and approaches in the Falkland Islands, particularly in light of global shifts, e.g. environmental change, green economy

Actions we plan to take include:

- identify current practices and procedures around (environmental) data management
- identify and explore opportunities for managing and sharing of data and information with relevance to the environment across sectors, both public and private, promoting the benefits of managing and sharing such data.

- explore the possibility of collating long-term climate or weather data sets from variable data sets for the Falkland Islands and the broader region
- increase capability within government to dedicate to exploration of opportunities for development in science and innovation (e.g. strategic horizon-scanning)
- identify indicators for each different theme as appropriate and begin measuring/collecting data for this

8.9. Communication and Education

- to improve communication and sharing of knowledge, data and information related to the environment
- to promote sustainable behaviour and environmental stewardship throughout the community
- to embed environmental awareness in lifelong learning, including education on the Falkland Islands' natural environment and the relationship between environment, society and economy
- to promote skills development to support the global shift towards a green economy and enable the local community to adapt to respond to environmental issues, e.g. global change, and opportunities in the Falkland Islands

Actions we plan to take include:

- incorporate more information about the Falkland Islands' natural environment into education programmes
- information campaigns and other outreach initiatives/programmes to encourage positive changes in consumer attitudes (e.g. reducing plastics use) and increase environmental awareness (e.g. invasive species awareness, growing of native species of plants, energy saving behaviours)
- work together with the private sector on projects or initiatives that could benefit the environment, in-line with the actions and objectives set out throughout the strategy



Tussac, credit: Emma Jaffray

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ANNEX 1: STRATEGY DEVELOPMENT PROCESS

The Islands Plan 2018-2022 contains a commitment to develop and implement a comprehensive environment strategy. ExCo paper 21/21 provides further details on the purpose of the Environment Strategy, which is: to address a broad range of environmental issues and be used as a vision to guide priorities, policy creation and work for the Falkland Islands in the long-term.

The final strategy has been developed using a robust, multi-stage process involving a wide group of representatives across a range of key groups. This process was primarily led by the Environment Department, with input at each stage from across government.

Direct involvement from across government was important to ensure a coherent approach and successfully integrate the strategy across all relevant policy areas. Early work on the strategy included input from various government directorates and stakeholders. A cross-departmental workshop identified key issues and themes. Following this, a formal internal stock-take process took place across FIG to capture the suite of relevant work that has already been completed, is underway, or is planned. This provided a comprehensive picture of work to date, as well as allowing for gaps to be identified. Individual directorates provided details of relevant legislation, policy, programmes, activities, projects, guidance, conservation measures and accreditation. As part of this process over 170 relevant documents were identified and recorded. Key policy interactions are identified in Figure 4, below). The strategy has been developed as a framework which sits alongside, and brings together, these existing and planned high-level policy documents across government which have environmental implications. Figure 4 gives a useful indication of broad areas where directorates' responsibilities will overlap with the implementation of the Environment Strategy – but it should be noted that it is not an exhaustive list of overlapping areas and will change over time. This analysis was used to ensure that objectives are aligned across policy areas as far as possible, understand potential policy interactions, and inform the identification of key issues and opportunities.

Public consultation and stakeholder engagement were central to the strategy development process, and were carried out in a number of different ways. Eleven in-depth, thematic workshops were carried out with stakeholder groups, including environmental organisations, industry bodies, business groups, children and young people. Three open public workshops were held, in Fox Bay, Goose Green, and Stanley. A public survey ran during February and March 2021 to gather views on the environment, test broad attitudes early on, and learn what is most important to the people who live in the Falkland Islands. A detailed workshop was carried out at an early stage with Members of the Legislative Assembly, focusing on issue and opportunity identification, as well as understanding their vision for the future of the Falkland Islands' environment to inform goal creation. An external stock-take exercise was completed, mirroring FIG's internal stock-take process, to provide further context. This information will also be used in the development of more detailed actions and plans, as strategy implementation progresses.

The views and ideas from each workshop were captured and thoroughly analysed. The topics raised at each session were categorised and counted across stakeholder groups to give an indication of the key themes arising. A similar process was carried out for survey responses, which were analysed closely to gauge the concerns, considerations and opinions of residents of the Falkland Islands.

This analysis led to a final longlist of all issues and opportunities raised throughout the stakeholder engagement process. Further details and an analysis of the responses received from the survey and workshops can be found in the stakeholder engagement report (2021), also available on the FIG website. Within the strategy itself, themes from the issues and opportunities raised throughout the public consultation and stakeholder engagement process are reflected under each topic. (More general comments relating to topics such as the structure, process, resourcing and governance of the strategy itself were also received. These have been considered and incorporated into the design of the strategy, plans for implementation, and next steps.)

Additional issues identified from an analysis of international literature were also added at this stage. To benchmark against international best practice and identify issues of global significance the following types of documents were reviewed:

- Comparable environment strategies from a range of other jurisdictions, including both small island states with a similar profile to the Falkland Islands and larger countries
- Multilateral Environmental Agreements (MEAs) applicable to the Falkland Islands
- Relevant global documents, objectives and indicators, such as the UN Sustainable Development Goals and the UN Environment Programme's '21 Issues for the 21st century'
- Relevant international scientific and environmental publications

Trends, issues, potential solutions, and policy options identified from this review have been incorporated into the relevant sections of the strategy.

Following on from this, initial draft versions of the strategy were shared within FIG, and detailed workshops were conducted with FIG directorates (where their remits overlap with key elements of the strategy), senior decision-makers with government, and MLAs. The purpose of these sessions was to:

- Bring subject experts and decision-makers together to review relevant sections of the draft strategy and provide feedback;
- Ensure that the most up-to-date and relevant information was captured and included within the draft;
- Consider the list of issues and opportunities developed, spot and address any gaps, provide supporting evidence where available, and prioritise urgent areas for action;
- Discuss strategic objectives and actions and how these could be realised in the long-term across government.

Following this, the draft strategy was taken to the Environment Committee, and the public asked for comment.

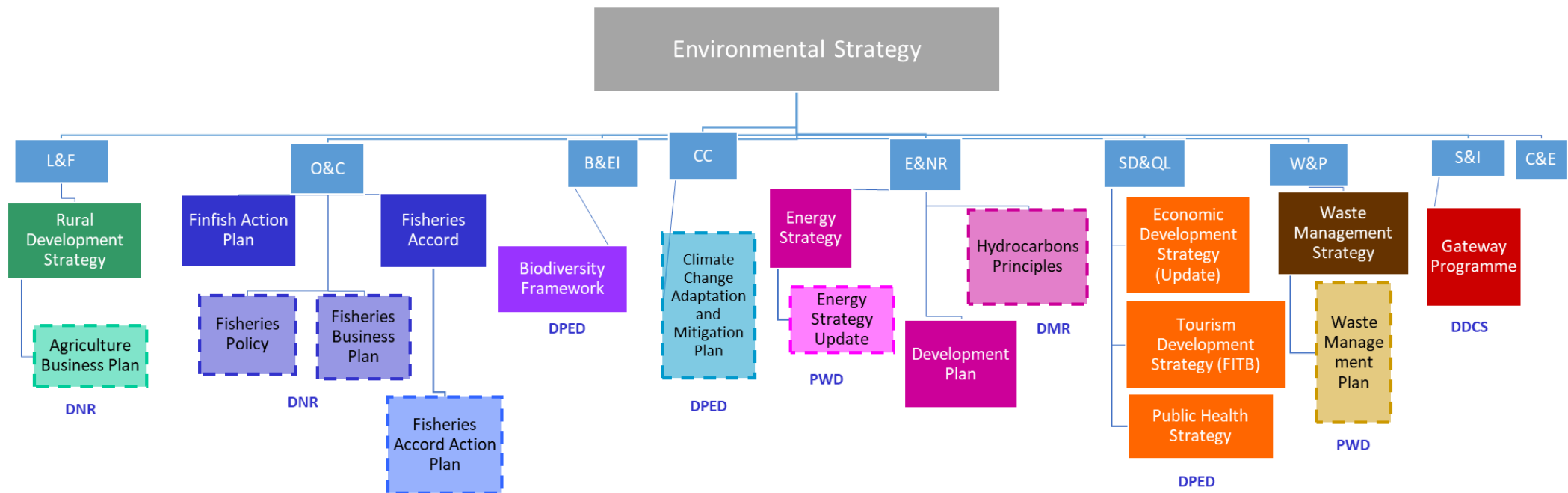


Figure 4: Some of the key interactions of the Environment Strategy with high-level policy that already exists or is in development at FIG. This is *not* a list of workstreams or plans emerging from the strategy. Please note that this grid is for illustrative purposes only and is based on the main topic covered in each document. There are many overlaps and linkages between policy areas which, for simplicity, are not shown here. Documents still to be developed are represented by a dotted outline. FIG Directorates are Natural Resources (DNR), Policy and Economic Development (DPED), Public Works (PWD) and Development and Commercial Services (DDCS).

L&F = Land & Freshwater

O&C = Oceans & Coasts

B&EI = Biodiversity & Ecosystem Integrity

CC = Climate Change

E&NR = Energy & Non-renewable Resources

SD&QL = Sustainable Development & Quality of Life

W&P = Waste & Pollution

S&I = Science & Innovation

C&E = Communication & Education

ANNEX 2 MULTILATERAL ENVIRONMENTAL AGREEMENTS THAT THE FALKLAND ISLANDS IS SIGNED UP TO

Table A2.1. Relevant multilateral agreements and the date of extension to the Falkland Islands.

International Convention on International Trade in Endangered Species of Wild Flora and Fauna - CITES (1976)
International Convention for the Prevention of Pollution from Ships – MARPOL (1995) • Protocol relating to the international convention for the prevention of pollution from ships – Annexes I, II, III & V (1995)
Convention on Fishing and Conservation of the Living Resources of the High Seas (1960)
International Convention on Oil Pollution Preparedness, Response and Co-operation – OPRC (2021)
International Convention relating to Intervention on the High Seas in the cases of Oil Pollution Casualties (1982) • Protocol relating to Intervention on the High Seas in cases of Oil Pollution by Substances other than Oil (1983)
International Convention on Civil Liability for Oil Pollution Damage – CLC Convention (1976 <i>Denounced 1998</i>) • Protocol to the International Convention on Civil Liability for Oil Pollution Damage on 29 November 1969 (<i>Denounced 1998</i>) • Protocol to Amend the International Convention on Civil Liability for Oil pollution Damage on 29 November 1969 (1996)
International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1978 <i>Denounced 1998</i>) • Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of the 18 December 1971 (<i>Denounced 1998</i>) • Protocol to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of 18 December 1971 (1996)
International Convention on the Regulation of Whaling (1947)
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; London Convention (1972) • 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (<i>Entry into Force 2006</i>)
Agreement of the Importation of Educational, Scientific and Cultural Materials; Florence Agreement (1954) • Protocol to the Agreement of 22 November 1950 on the Importation of Educational, Scientific and Cultural Materials (1989)

United Nations Convention on the Law of the Sea (1997) • Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10.12.1982 (1997) • Agreement relating to the implementation of the previous United Nations Convention on the Law of the Sea (1982) relating to the Conservation and Management of Straddling Fish Stock and Highly Migratory Fish Stocks (2001)
The Convention on the Conservation of Antarctic Marine Living Resources; CCAMLR (1982)
The Convention for the Conservation of Antarctic Seals (1974)
Food and Agriculture Organisation Committee of Fisheries: Code of Conduct for Responsible Fisheries (1995) • Constitution on the Food and Agriculture Organisation (1945)
Convention on Wetlands of International Importance, especially as Waterfowl Habitat – RAMSAR Convention (1976) • Protocol to amend the Convention on Wetlands of International Importance of 2 February 1971 as Waterfowl Habitat (1984) • Amendments to Articles 6 & 7 of the Convention on Wetlands of International Importance (02.02.1971) Especially as Waterfowl Habitat (1990)
Convention on the Conservation of Migratory Species of Wild Animals – CMS (1985) • Agreement on the Conservation of Albatross and Petrels – ACAP (2004) • Memorandum of Understanding on Sharks (2012)
Vienna Convention for the Protection of the Ozone Layer (1987) • Montreal Protocol on Substances that Deplete the Ozone Layer (1988)
Convention on Biological Diversity (2016)
United Nations Framework Convention on Climate Change (2007) • Kyoto Protocol to the United Nations Framework Convention on Climate Change (2007) • Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (2020)
Convention for the Protection of World Cultural and Natural Heritage (1984)
Protocol on Environmental Protection to the Antarctic Treaty; Antarctic-Environmental Protocol or Madrid Protocol (1995)



Falkland Islands Government

Environment Department | Directorate of Policy & Economic Development

Environment Strategy for the Falkland Islands Engagement Report



Falkland Islands Government

Environment Department

Directorate of Policy & Economic Development

July 2021



Environment Strategy for the Falkland Islands Engagement Report

Background

The Islands Plan 2018-2022 called for the creation of a comprehensive Environment Strategy for the Falkland Islands. In January 2021 Executive Council (*ExCo 21/22*) approved consultation and stakeholder engagement with regard to the Environment Strategy. The FIG Directorate of Policy and Economic Development and its Environment Department ran a public consultation (Appendix 1) from the 18 February to 14 March 2021, and engaged with key stakeholders and the general public through a series of workshops. The main purpose of this was to identify key issues and opportunities with respect to the natural environment of the Falkland Islands to inform the creation of the Environment Strategy by FIG.

The results of these workshops and the public consultation are presented in this report. These results represent the collective responses of the individuals and organisations that were consulted.

The different suggestions of stakeholders and the public are being used to inform the development of the strategy, for example informing the issues and opportunities it considers. The finer detail of comments is also anticipated to feed into a variety of different workstreams across government, some of which will flow out of the strategy.

Summary of Results

Key issues and opportunities were identified within a broad series of environmental topics. Cross-cutting issues relating to the strategy, including how the strategy will work in practice were also raised. Issues and opportunities were fairly comparable between stakeholder workshops and the public consultation, with similar issues – albeit from slightly different perspectives – raised by various groups of stakeholders.



Public Survey Results

This section details the results of the public survey (Appendix 1) that was run by FIG during February and March 2021 for residents of the Falkland Islands.

Presentation of the data

The issues, opportunities, and areas of focus that respondents identified under each section of the public consultation were coded into different categories of statements. These categories were then grouped into themes and sub-themes which were informed by a thematic analysis of the overall findings from the public and stakeholder consultations.

Throughout this report, the results are presented as graphical representations of the frequency that specific themes and sub-themes were identified by respondents. The bubble diagrams in Figures 1 to 19 are scaled to show the number of times a category, sub-theme or theme was mentioned; the larger the circle, the more frequently that particular issue was raised. It is important to bear in mind that these results present a snapshot of people's responses and that any prioritisation of issues should not be inferred.

Respondents

A total of 217 surveys were returned; 192 were submitted via the online survey and 25 in hard copy. Of those, 206 surveys were determined to be valid responses and sufficiently complete to be included in the analysis¹; this represents approximately 8% of the adult population in the Islands. The demographic profile of respondents (Table 1) indicates a good representation by location across the Islands, age group and sector of employment and was largely completed by those having lived for six or more years in the Islands.

¹ Invalid responses were those that were duplicate submissions or where only the first few questions were semi-complete and were judged to have been submitted in error.



Table 1: Demographic profile of respondents

Variable	Group	n	%
Location	Stanley	144	75%
	East Falkland	21	11%
	West Falkland	14	7%
	Outer island	12	6%
	MPC	1	1%
	Not answered	14	
Age group	16-18	1	1%
	19-25	6	3%
	26-35	32	17%
	36-45	38	20%
	46-55	55	29%
	56-65	33	17%
	Over 65	27	14%
	Not answered	14	
Length of time living in the Islands	less than 1 year	11	6%
	1-5 years	27	14%
	6-10 years	19	10%
	11-20 years	19	10%
	More than 20 years	116	60%
	Not answered	14	
Sector of employment	Not applicable	35	18%
	Agriculture	18	9%
	Business Services	10	5%
	Communications	5	3%
	Conservation / Environmental Protection	19	10%
	Finance	3	2%
	Government (Public Sector)	50	26%
	Construction	4	2%
	Fishing	6	3%
	Hospitality	2	1%
	Marine Services	6	3%
	Oil & Gas/Oil & Gas Services	1	1%
	Retail	2	1%
	Tourism	20	10%
	Other	12	6%
	Not answered	13	

Note: per cent totals may not sum to 100 due to rounding.



HOPES FOR THE FUTURE

Respondents were asked to imagine the natural environment of the Falkland Islands in 2040 compared to the present and to state what they hoped to see, not see, stay the same or change. The following are an extract of representative comments (direct quotes) from respondents in their own words.

Hope to See

“Clean water, open spaces, all native flora and fauna thriving due to well planned, resourced and properly legislated environmental bodies which are seamlessly incorporated in every level of FIG”

“Healthy seas, lands, air and people”

“Largely the same as what we have now, but with some improvements in areas both terrestrial and marine”

“A government that cares about the environment who approves decision with careful thought given to the possible impact on the Falklands”

“Environment being considered with EVERY decision not as an add-on at the end; whether its fishing, climate change mitigation, native flora, agriculture, developments, etc. I hope I will see a community and Government that actively speaks out for and cares for its nature.”

“As little (negative) change as possible. Continuation of existing activities (farming/fishing etc), but still a great location to be outdoors and see spectacular wildlife...Sustainable tourism (not just from cruise ships)”

“More designated marine protection areas (especially inshore areas) with no commercial exploitation and more habitat restoration areas...”

“Restorative agricultural practices are supported and embraced...”

“Strong environmental protection for our unique ecosystems, with the Falklands leading the way in demonstrating how a government can protect, promote and maintain our natural environment”

“Healthy native habitats and populations of native species. Eradicated invasive species.”

“A carbon neutral country, with world leading energy extraction”

“Green energy i.e. renewable energy to be used as much as possible to power Stanley and surrounding areas. Minimal reliance on fossil fuels for mainstream energy production.”

“That we have proper waste treatment facilities implemented, and the Eliza Cove site to be rehabilitated”.

“...the balance is informed by recognition that some "traditional" practices may need to change (Penguin eggging, shooting raptors etc) and but also by recognition that it will not be possible to attain a perfectly "natural" environment”

“A setup that can adequately support a developing island economy but not to the detriment of the natural heritage the islands possess”

“...recognition that a clean and healthy environment is hugely important to our economy”



“Previous declaration of a Climate Emergency, introduction and use of a legislative framework for companies to invest and utilise green energy and eco-friendly business practice”

“Consideration/preparation for the coming effects of climate change and the negative effects this will have on the islands and wildlife”

“A better understanding of species via science and research is essential”.

“At least one hour a week in schools for outdoor learning for all years across the board at school (Reception all the way to year 11)”

“The population educated (schools as well) to appreciate & care for the natural environment”

Hope Not to See

“I also would hate to see the marine areas impacted by increased fishing in Falklands waters. Fishing methods such as trawling could be detrimental to benthic ecosystems and heavy fishing activity could seriously hinder any communities from recovering.”

“Fishing waste - such as nets & buoys around coastlines.”

“Large areas of erosion due to a combination of poor ground cover and drying climate”

“Land ecosystems still under the same current pressures of unsustainable farming, introduced pests and erosion.”

“Reduction in native species and degradation of ecosystems”

“The current situation: FI environmental policy 50 years behind the rest of the world.”

“A reliance on fossil fuels and dependence on oil extraction”

“Still using diesel power station in town”

“Eliza Cove and Mary Hill tips, polluting vehicles driving round.”

“Less single use plastic items being sold, i.e. plastic water bottles/ straws/ sandwich bags.”

“More children with asthma and other illnesses brought on by pollution.”

“Any more restrictions and ridiculous rules”

“No projects that will bring a short-term financial gain at the expense of the environment such as commercial salmon farming.”

“Huge increase in tourism meaning some protected areas are put under pressure with lots of visitors.”

“No efforts made by private or public sectors to acknowledge or tackle the climate crises”

“A lack of conversation around protecting the natural environment. No community interaction or encouragement to support the natural environment”



Hope to See Stay the Same

“A small human population striving to do as little damage to the natural environment and wildlife of the Islands as possible”

“Nothing will stay the same.”

“Untouched Tussac islands and other native habitats”

“Biological diversity and almost pristine environment”.

“The Falklands currently has many unique ecosystems this needs to stay the same and be protected better”

“No oil extraction occurring”

“The clean pollution free air & beaches”

“Still plenty of green, open spaces and easy access for the public to enjoy these areas”.

“Our community and the way we live”

“The freedom we currently have to enjoy our natural environment”

“Freedom to roam over public land including unfettered access to beaches with only the minimum necessary regulations”

“The population remains static and the number of cruise ships strictly controlled”

“The environment as a minimum cannot be degraded further; this reflects economic sense and improvements will be economically beneficial”.

“That global warming will not have accelerated.”

“The education system of constantly educating and making sure younger generations are aware of the environmental problems that the Falkland Islands and the world face.”



Hope to See Change

“Improved fisheries management”

“Hope to see security for marine species through improved management of our marine resource.”

“I hope impacted areas are restored, ecosystem-based management becomes a fact and marine protected areas are introduced.”

“Vastly improved use of sustainable energy”

“The Falklands should become world leaders in renewable energy and being carbon neutral rather than waiting to see what happens elsewhere first.”

“Greater understanding of the value of the natural world to human health at a policy level”

“Falkland Islanders are very good at recognising the importance of conservation but may be less aware of the importance of the environment for our health and climate.”

“That FIG takes the lead in protecting our environment and makes decisions for the long term, rather than short term economic gains, and demonstrates to other nations that we are leading the way in promoting sustainable development and putting the environment above profits.”

“More research into the impact on climate change on the Falkland Islands.”

“Better understanding of ecosystem relationships, especially related to food in the oceans and climate change”.

“Increased baseline data of what is occurring...”

“A rational, science-based discussion leading to a progressive, world-leading environmental policy as opposed to reactionary, populist responses.”

“People's attitude toward the value of the natural environment and increased respect for nature”

“In an ideal world it would be great to see all children educated by parents and schools to care as much for the welfare of the wildlife, vegetation, air and seas as for their own pleasure.”



BIGGEST ENVIRONMENTAL ISSUES



Figure 1: The biggest environmental issues in the Falkland Islands, including its waters. Respondents identified 60 different issues that they believe are the biggest environmental issues facing the Falkland Islands; 202 of 206 respondents identified at least one issue. The larger the bubble, the more frequently this issue was mentioned.



Table 2: The biggest environmental issues in the Falkland Islands, including its waters, identified by respondents and the number of times these issues were mentioned. Corresponds to Figure 1.

Theme	Sub theme	Category	
Communication and Education	Communication & accessibility of information	Consistent messaging from government	2
	Environmental stewardship	Encourage community with education, communication or other programmes	5
	Government and the public	Concerns of over-interventionist policies/control	3
		Concerns over insufficient protection/controls	18
		Empower community to take proactive role for environment	4
		Encourage public to engage in decision-making process	2
	Other	Other	1
Cross-cutting Considerations	Biodiversity protection/management	Increase protection of areas	6
		Protect biodiversity	1
	Climate change	Concerns over impacts of climate change	34
Sustainable Economic Development	Environmental interactions & cumulative impacts	Environmental interactions of industries	1
	Future economic activity & prosperity	Not undermining economic activity	1
	Managing environmental impact	Concerns for managing impact of future industry	4
		More sustainable supply chains	2
		Population growth leads to increased environmental impact	10
		Promote pro-environment practice through Planning & Building	1
		Sustainable/environmentally responsible economic development	10
	Other	Other	1
	Tourism and the environment	Concerns over mass tourism	2
		Manage environmental impact of tourism	4
Energy & Non-renewable Resources	Energy source	Other	2
	Green transport	Explore green transport options	2
	Non-renewable energy	Concerns about power station location & power from fossil fuels	5
	Non-renewable resources	Concerns & considerations e.g. fossil fuels, calcified seaweed	25
	Renewable energy sources	Opportunities for increased renewable energy sources	8
	Other	Other	1
Land & Freshwater	Challenges to improving land and freshwater environments	Limited capacity/resourcing on private farms for implementation	1
	Erosion and vegetation changes	Concerns about ecosystem and vegetation changes	7
		Erosion and smothering concerns	15
	Fire management	Increase wildfire awareness and management in Camp	1
	Invasive species and biosecurity	Better awareness and management of invasive species & biosecurity	17
	Land management	Better practices that balance environment & income	26
		Improve planning & decision-making for land management	7
	Other	Other	2
	Problem native species	Management of problem native species	4
	Water management	Concerns about land drying out, rainfall patterns	6
		Improve (long-term) water management	1
		Other	2

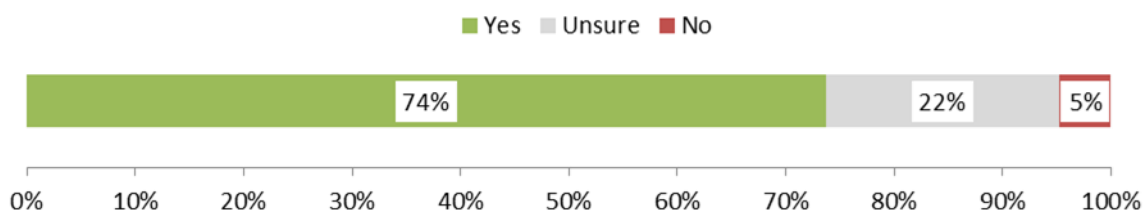


Table 2 continued.

Theme	Sub theme	Category	
Oceans & Coasts	Aquaculture	Concerns about impacts & responsible management	56
		Economic potential & planned development	1
	Fisheries and renewable marine resources	Sustainable marine & fisheries management	36
	Increased protections for marine environment	Increase protections including protected areas	9
	Knowledge	Increase knowledge of marine environment	1
	Other	Other	2
	Safety and environmental controls at sea	Licensed & safe boats	2
Other	Other	Other	2
Quality of Life & Health	Way of life	Balance culture, quality of life and environment	1
		Concerns about driving off-road in sensitive areas	9
Science and Innovation	Exploring innovation opportunities	Explore & increase innovative industry, technology & practices	1
	Increased data and monitoring	Need better baseline data & longterm monitoring	4
	Research and skills	Promote local research & innovation including through government & funding	3
Waste & Pollution	Challenges specific to Falkland Islands	Imported/external waste concerns	15
	Emissions	Management considerations	8
	Other	Other	1
	Pollution controls and waste management considerations	Better waste management and pollution controls	78
		Concerns around plastic	19
		Environmental impacts of current disposal	14
		Reduce litter	2
	Re-use and recycling	Recycling opportunities	14
	Sewerage	Better sewage management	26

MISSSED OPPORTUNITIES

The majority of respondents who answered this question thought that there were missed opportunities for the Falkland Islands natural environment (Figure 2). Respondents also provided examples of these (Figure 3, Table 3).



Note: Non-response to this question: n=16.

Figure 2: The responses of those who answered the question, “Do you think there are opportunities we aren’t taking advantage of in the natural environment in the Islands? This can relate to ecological, social, economic or any other opportunities.”



Figure 3: Missed opportunities identified by respondents. Respondents identified 30 different areas they believe are missed opportunities; 149 of 206 respondents identified at least one missed opportunity. The graphic corresponds to Table 3. The relative size of the bubbles indicates the number of times that these topics were mentioned by respondents.



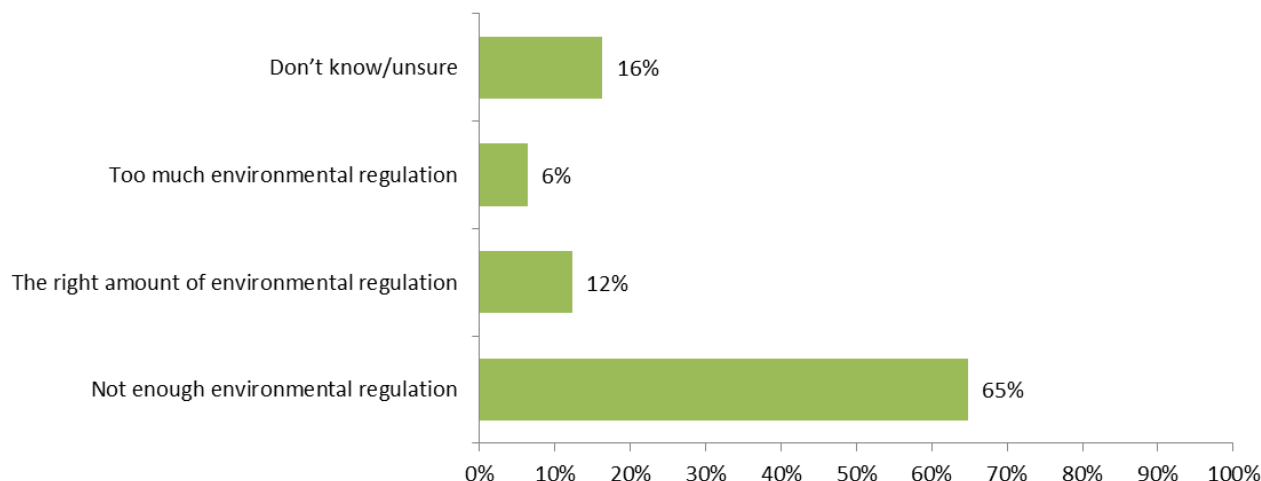
Table 3. Missed opportunities identified by respondents and the number of times they were mentioned. A total of 149 of the 206 survey respondents identified at least one missed opportunity. Corresponds to Figure 3.

Missed opportunities	Frequency
Renewable Energy	58
Sustainable Tourism	15
Better Land Management	12
Carbon Offsetting	12
Education	12
Habitat Restoration	8
Sustainable Practices	8
Regulation	7
Innovation Opportunities	5
More Recycling	5
Carbon Capture	4
Financial Incentives	4
Locally Sourced Produce	4
Sustainable Economy	4
Community Engagement	3
Government-led Initiatives	3
Marine Protected Areas	3
Environmental Controls and Management	2
Going Net Zero	2
More Research and Data	2
Public Engagement	2
Public Health	2
Sustainable Consumables	2
Zero-Waste	2
Aquaculture	1
More Re-use Opportunities	1
Plant Conservation	1
Public Encouragement	1
Recreational Activities	1
Waste Management	1



REGULATION

When asked about environmental regulation in the Falkland Islands, 65% of those who answered this question thought that there was not enough regulation (Figure 4).



Note: Non-response to this question: n=4.

Figure 4: The responses of those who answered a multiple-choice question on what they thought of the current level of environmental regulation in the Falkland Islands.

WASTE MANAGEMENT ISSUES

When asked which listed issues were important for waste management in the Falkland Islands, all respondents identified at least one of the listed issues as being important (Figure 5) and 93 of 206 respondents identified further issues (Figure 6). Most of those who answered the relevant questions thought that there should be waste management targets (Figure 7) and agreed that they would be willing to pay higher service charges if levels of recycling could be increased (Figure 8).

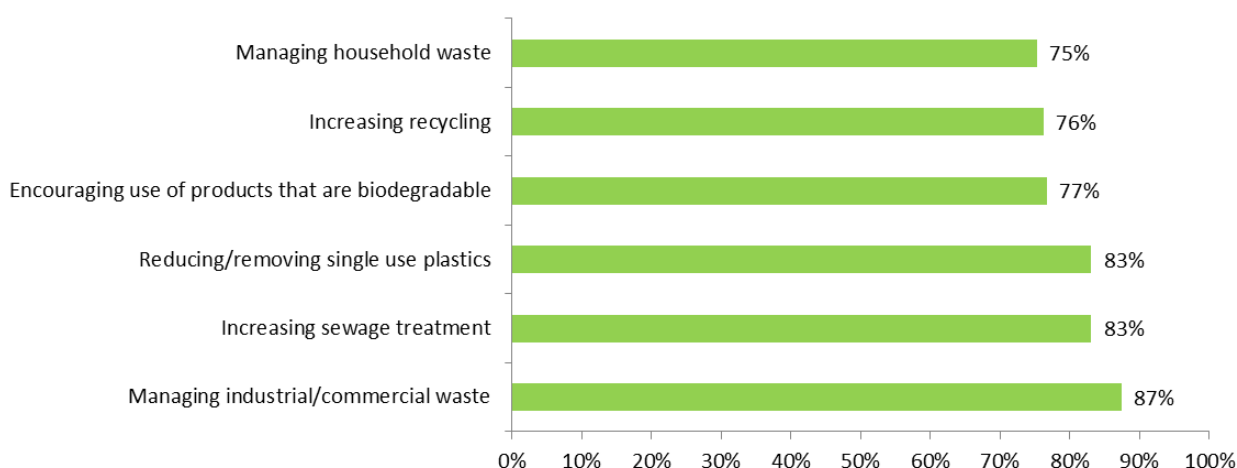


Figure 5: The proportion of respondents who identified each of the listed issues relating to waste management as being important for the Falkland Islands. Note: all respondents (n=206) identified at least one of the issues on the provided list as being an important area of focus.



Figure 6: Respondents identified 22 additional areas that they believe should be focused on in relation to waste management; 93 of 206 respondents identified at least one additional area. Corresponds to Table 4.



Table 4. Additional areas that respondents believe should be focused on in relation to waste management and the number of times they were mentioned. Corresponds to Figure 6.

Other Waste Management Issues	Frequency
Managing Camp Waste	15
Better Landfill Management	12
Managing Commercial and Industrial Waste	11
More Recycling and Re-use Opportunities	10
Dealing with Hazardous Waste	9
Environmentally Friendly Consumables	8
Repurpose Waste	8
Better Sewage Treatment & Management	6
Education and Public Engagement	6
Efficient Energy Use	4
Financial Incentives	4
Enforcement & Sanctions	3
Better Waste Management Practices	2
Locally Sourced Produce	2
Coastal Waste	1
Fossil Fuel Pollution	1
Innovation Opportunities	1
More Research and Data	1
Pollution	1
Reduce Non-renewable Energy	1
Regulation and Controls	1
Waste Reduction	1

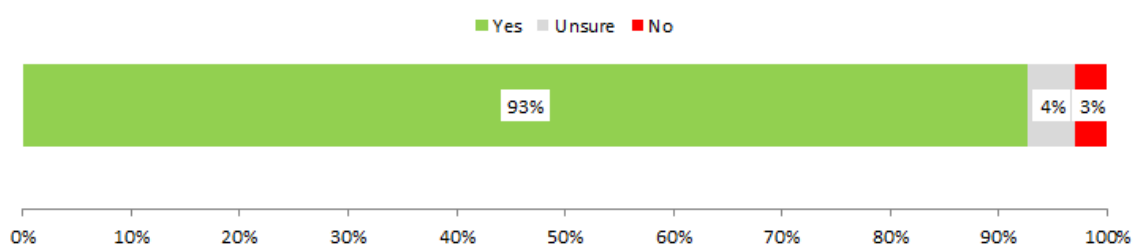


Figure 7: The responses of those who answered the question on whether they thought that the Falkland Islands should set clear targets in relation to waste management.

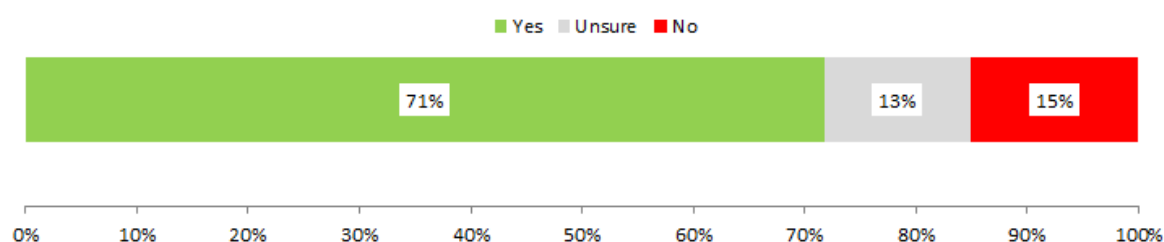


Figure 8: The responses of those who answered the question on whether they would be willing to pay a higher service charge if more of their household waste could be recycled.



POLLUTION CONTROL ISSUES

Survey respondents identified all of the listed focal areas related to pollution control as being important for the Falkland Islands, though commercial pollution, pollution on land and freshwater and pollution in the ocean were identified by more respondents (Figure 9). Additionally, twenty-five areas were identified in the 'other areas' comments in relation to pollution control with 62 of the 206 respondents identifying at least one area (Figure 10). The majority of respondents thought that the Falkland Islands should set targets in relation to pollution control (Figure 11).

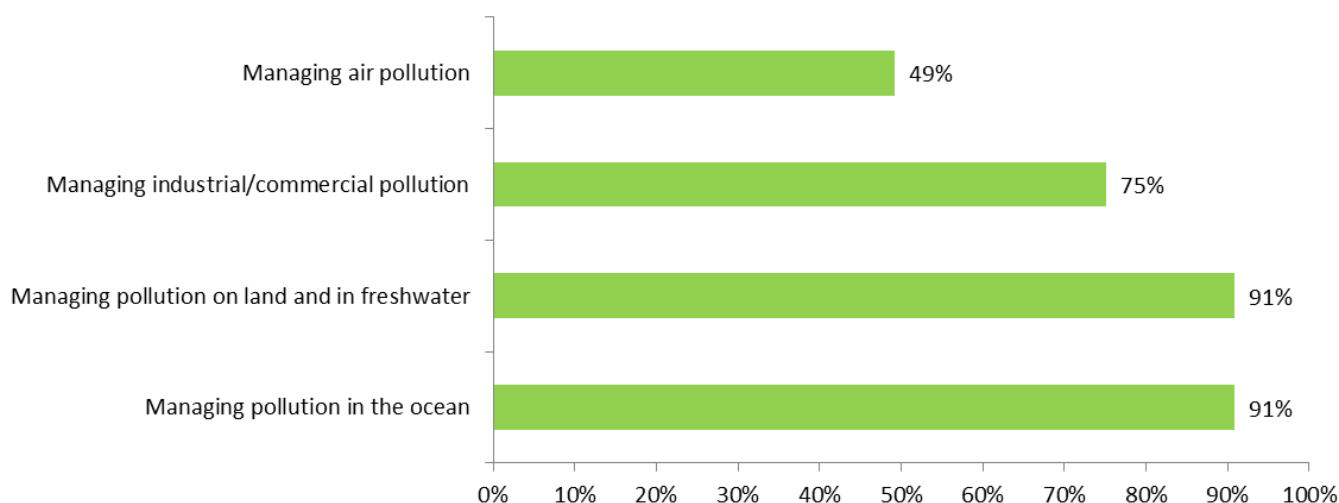


Figure 9: The proportion of respondents who identified each of the listed issues relating to pollution control as being important for the Falkland Islands. Note: 197 of 206 respondents identified at least one of the issues on the provided list as being an important area of focus.

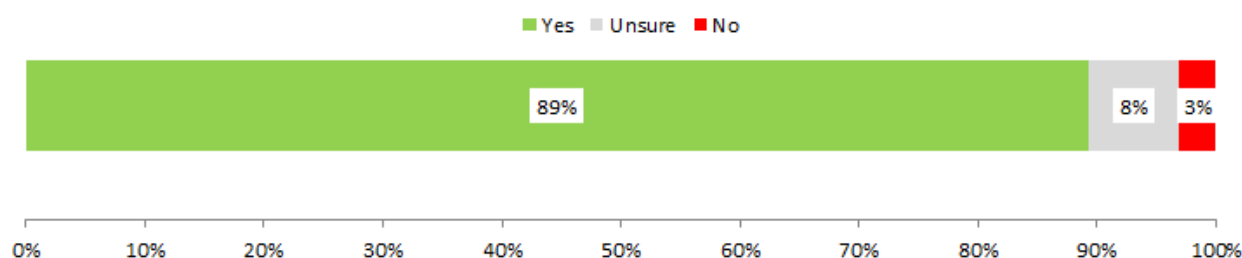


Figure 10: Respondents identified 25 additional areas that they believe should be focused on in relation to pollution control; 62 of 206 respondents identified at least one additional area. Corresponds to Table 5.



Table 5. Additional areas that respondents believe should be focused on in relation to pollution control and the number of times they were mentioned. Corresponds to Figure 10.

Other Pollution Control Issues	Frequency
Marine Pollution	13
Agricultural Practices and Pollution	7
Noise and Light Pollution	7
Commercial Pollution Controls	6
Education and Public Engagement	6
Fossil Fuel Pollution	5
Better Sewage Treatment & Management	4
Electric Vehicles	4
Inshore Pollution	4
Managing Air Pollution	4
Hazardous Waste Disposal	3
Regulation and Enforcement	3
Better Landfill Management	2
Targets Needed	2
Vehicle Pollution	2
Carbon Zero	1
Controls and Sanctions	1
Don't prioritise the Economy	1
Habitat Restoration	1
Innovation Opportunities	1
More Research and Data	1
No Actions Needed Now	1
Renewable Energy	1
Solutions relevant for the Islands	1
Targets not Needed	1



Note: Non-response to this question: n=11.

Figure 11: The responses of those who answered the question on whether they thought that the Falkland Islands should set clear targets in relation to pollution control.



WILDLIFE AND NATURE ISSUES

Survey respondents identified all of the listed focal areas related to nature and wildlife as being important for the Falkland Islands, (Figure 12). Additionally, twenty-three areas were identified in the 'other areas' comments in relation to wildlife and nature with 61 of the 206 respondents identifying at least one area (Figure 13). The majority of respondents thought that the Falkland Islands should set targets in relation to wildlife and nature (Figure 14).

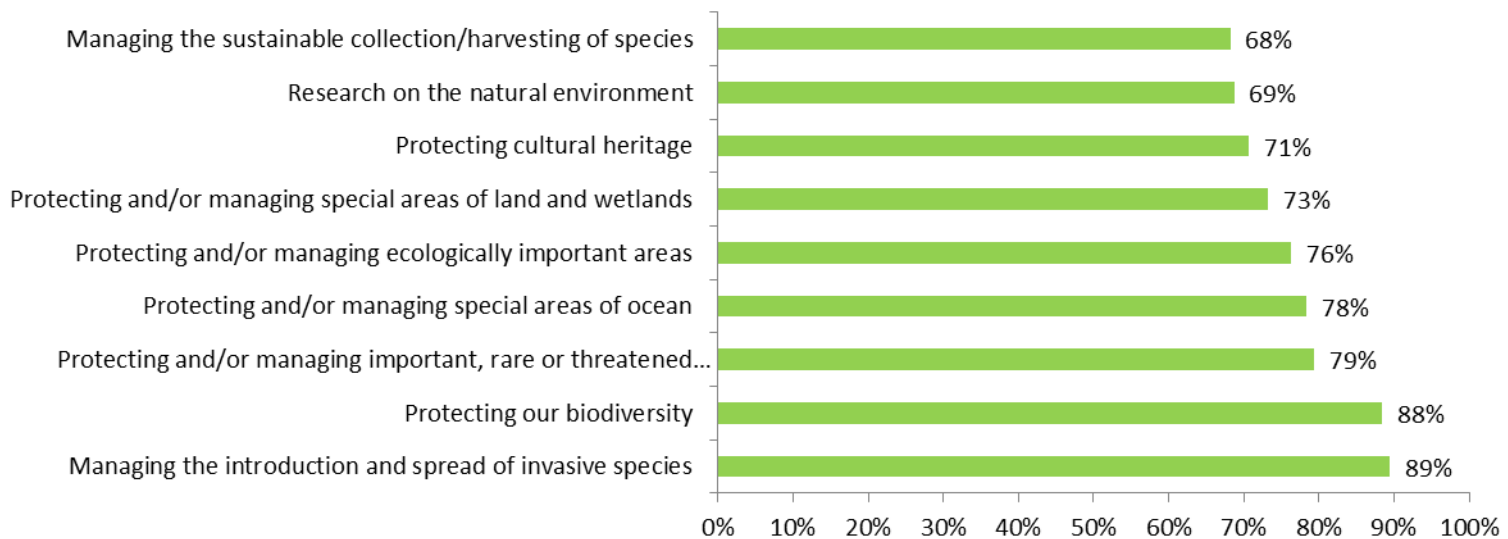


Figure 12: The proportion of respondents that identified each of the listed issues relating to wildlife and nature as being important for the Falkland Islands. Note: 198 of 206 respondents identified at least one of the issues on the provided list as being an important area of focus.

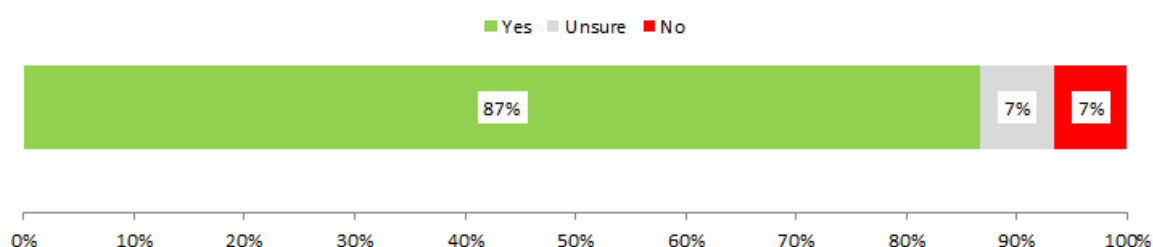


Figure 13: Respondents identified 23 additional areas that they believe should be focused on in relation to wildlife and nature; 61 of 206 respondents identified at least one additional area. Corresponds to Table 6.



Table 6. Additional areas that respondents believe should be focused on in relation to wildlife and nature and the number of times they were mentioned. Corresponds to Figure 13.

Other Wildlife & Nature Issues	Frequency
Habitat Restoration	9
Prevent Aquaculture	7
Better land management practices	6
Education and Public Engagement	5
Facilitating Access to Key Areas	3
Government-led Initiatives	3
Managing Invasive Species	3
Regulation and Enforcement	3
Limit Vehicle Access to Important Areas	2
Marine Protected Areas	2
More Protected Sites	2
Carbon Capture	1
Collaboration with Landowners	1
Equally as Important as the Economy	1
Eradicate Invasives	1
Less Restrictions to Freedom	1
Limit Mass Tourism	1
More Research and Data	1
Protect Freshwater Species	1
Realistic and Achievable Plans	1
Set and Work Towards Targets	1
Sustainable Agriculture	1
Sustainable Fishery	1



Note: Non-response to this question: n=10.

Figure 14: The responses of those who answered the question on whether they thought that the Falkland Islands should set clear targets in relation to wildlife and nature.



MINERALS AND ENERGY ISSUES

Survey respondents identified all of the listed focal areas related to minerals and energy as being important for the Falkland Islands, though comparatively fewer respondents identified the issues '*extraction and use of non-renewable resources onshore*', '*continued generation and use of non-renewable energy sources*' and '*extraction and use of non-renewable resources offshore*' as being important (Figure 15). Additionally, eight areas were identified in the 'other areas' comments in relation to minerals and energy with 57 of the 206 respondents identifying at least one area (Figure 16). The majority of respondents thought that the Falkland Islands should set targets in relation to minerals, energy use and energy sources (Figure 17).

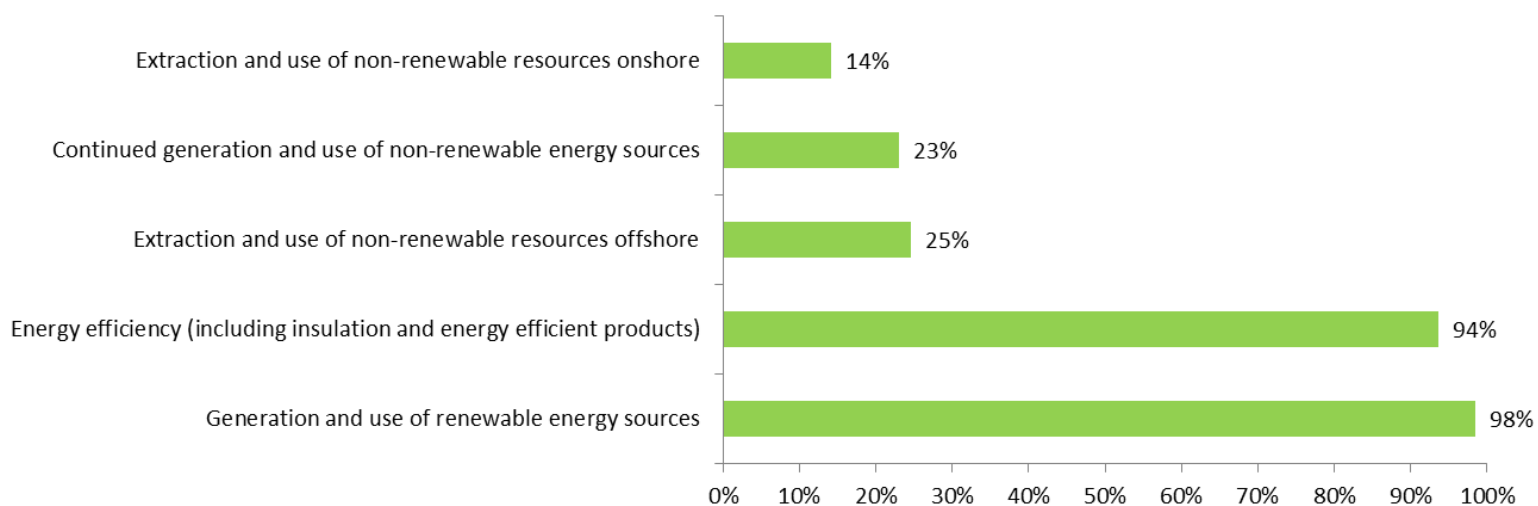


Figure 15: The proportion of respondents that identified each of the listed issues relating to minerals and energy as being important for the Falkland Islands. Note: 191 of 206 respondents identified at least one of the issues on the provided list as being an important area of focus.

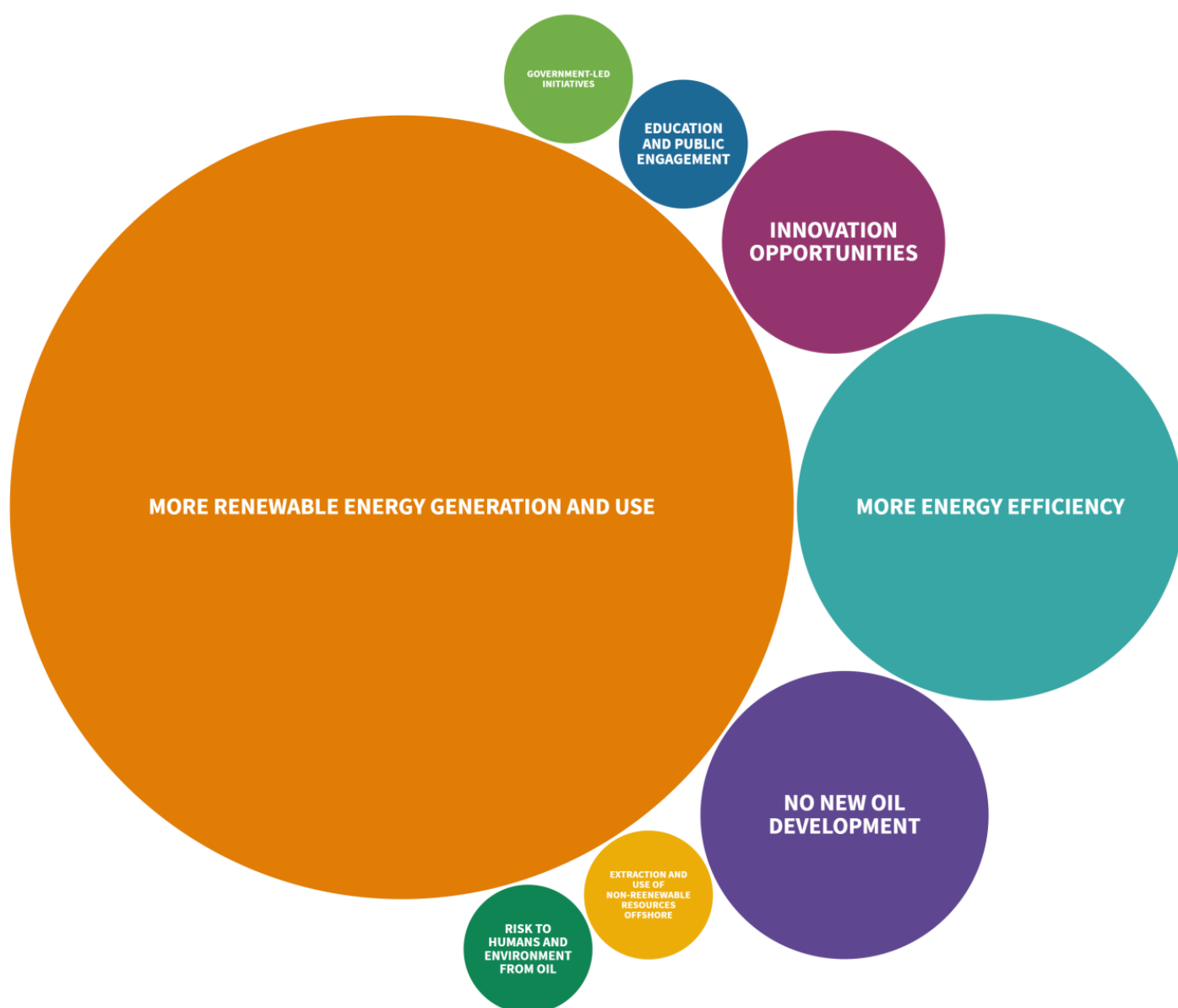
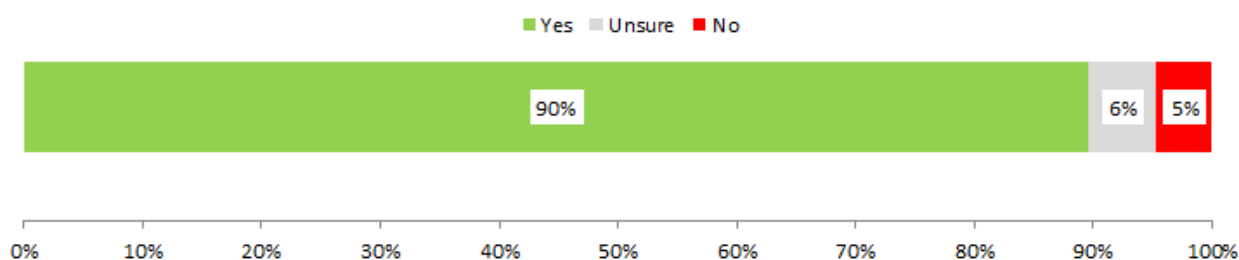


Figure 16: Respondents identified 8 additional areas that they believe should be focused on in relation to minerals and energy; 57 of 206 respondents identified at least one additional area. Corresponds to Table 7.

Table 7. Additional areas that respondents believe should be focused on in relation to energy and minerals and the number of times they were mentioned. Corresponds to Figure 16.

Other Minerals and Energy Issues	Frequency
More renewable energy generation and use	37
More Energy Efficiency	9
No New Oil Development	5
Innovation Opportunities	3
Education and Public Engagement	1
Extraction and use of non-renewable resources offshore	1
Government-led Initiatives	1
Risk to Humans and Environment from Oil	1



Note: Non-response to this question: n=13.

Figure 17: The responses of those who answered the question on whether they thought that the Falkland Islands should set clear targets in relation to minerals, energy use and energy sources.

CLIMATE CHANGE ISSUES

Survey respondents identified all of the listed focal areas related to global climate change as being important for the Falkland Islands (Figure 18). Additionally, 25 areas were identified in the 'other areas' comments with 43 of the 206 respondents identifying at least one area (Figure 19). The majority of respondents thought that the Falkland Islands should set targets in relation to mitigating the effects of climate change, in addition to the international targets we are obliged to meet.

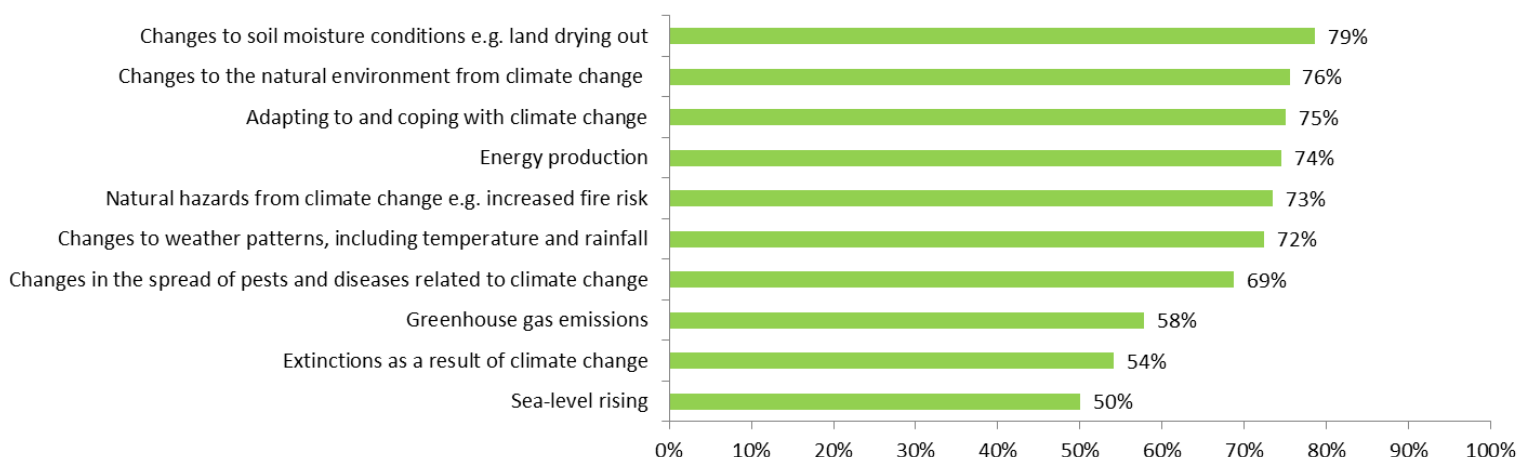


Figure 18: The proportion of respondents that identified each of the listed issues relating to global climate change as being important for the Falkland Islands. Note: 192 of 206 respondents identified at least one of the issues on the provided list as being an important area of focus.

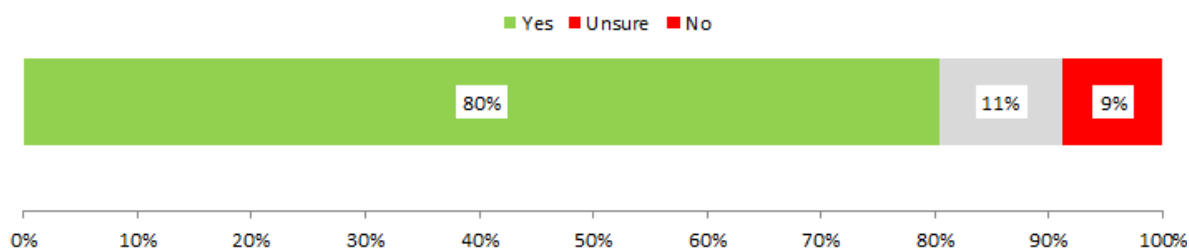


Figure 19: Respondents identified 25 additional areas that they believe should be focused on in relation to global climate change; 43 of 206 respondents identified at least one additional area. Corresponds to Table 8.



Table 8. Additional areas that respondents believe should be focused on in relation to global climate change and the number of times they were mentioned. Corresponds to Figure 19.

Other Climate Issues	Frequency
Data collection and monitoring	4
Better land management practices	3
Carbon capture	3
Increase renewable energy production	3
International standing and reputation	3
Better water conservation and management	2
Biodiversity Loss	2
Building resilience	2
Changes to marine environment	2
Educate to change consumer behaviour	2
Education and Public Engagement	2
Habitat restoration	2
Alternative transport options	1
Better Landfill Management	1
Better Planning and Building Practices	1
Better waste management practices	1
Carbon Offsetting	1
Don't facilitate external carbon offsetting	1
Financial incentives for action	1
Focus on human activity	1
Limit Mass Tourism	1
More energy efficiency	1
Reduce carbon footprint	1
Renewable energy production	1
Soil moisture conditions	1



Note: Non-response to this question: n=12.

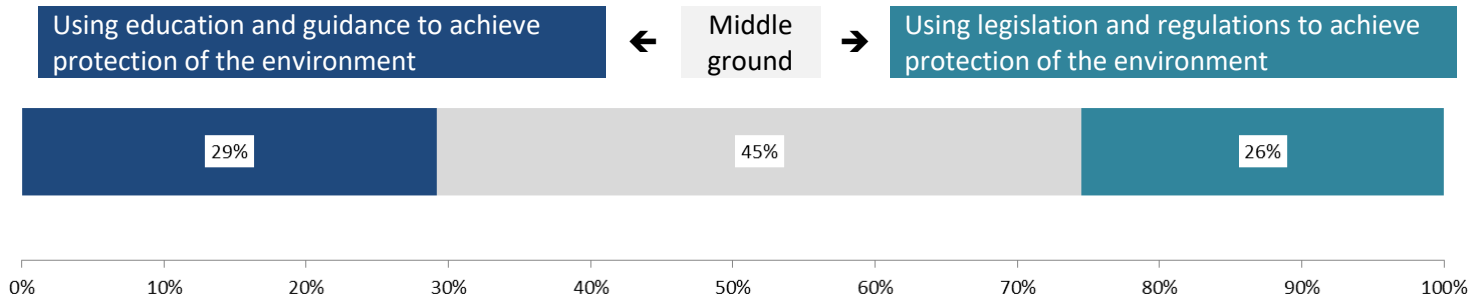
Figure 20: The responses of those who answered the question on whether they thought that the Falkland Islands should set clear targets in relation to mitigating the effects of climate change, in addition to the international targets we are obliged to meet.



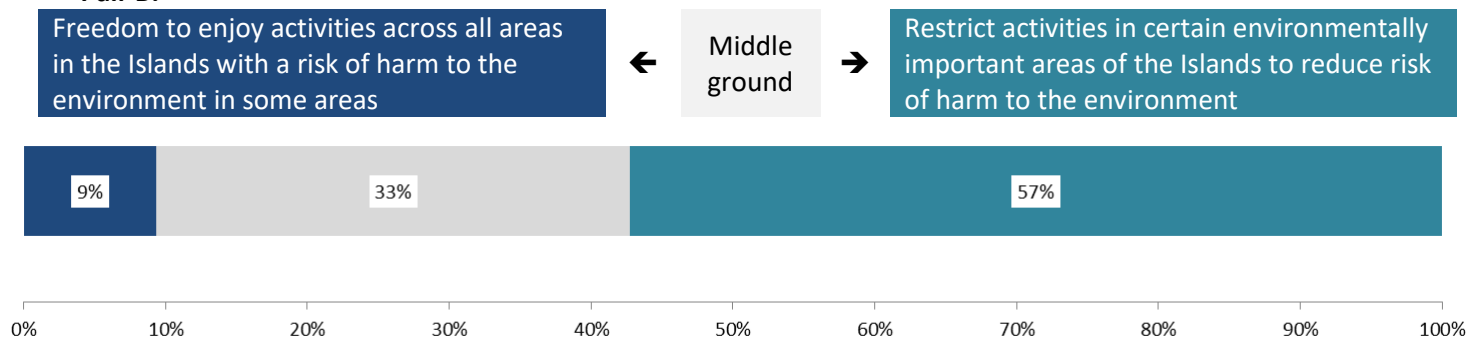
TRADE-OFF ISSUES

Survey respondents were asked to review a set of statement pairs and tick which one they most agreed with. A middle ground option was provided if survey participants preferred a compromise between the pair of statements (Figure 21).

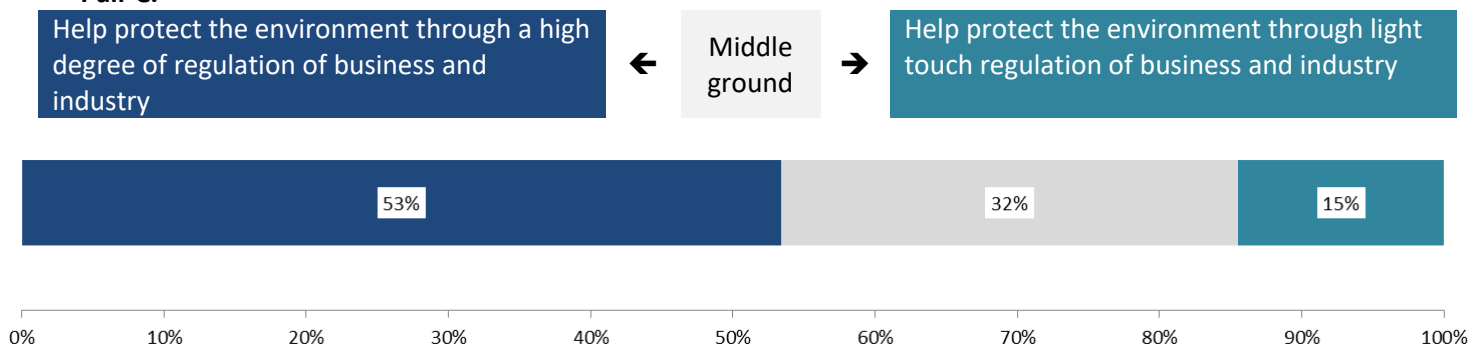
Pair A.



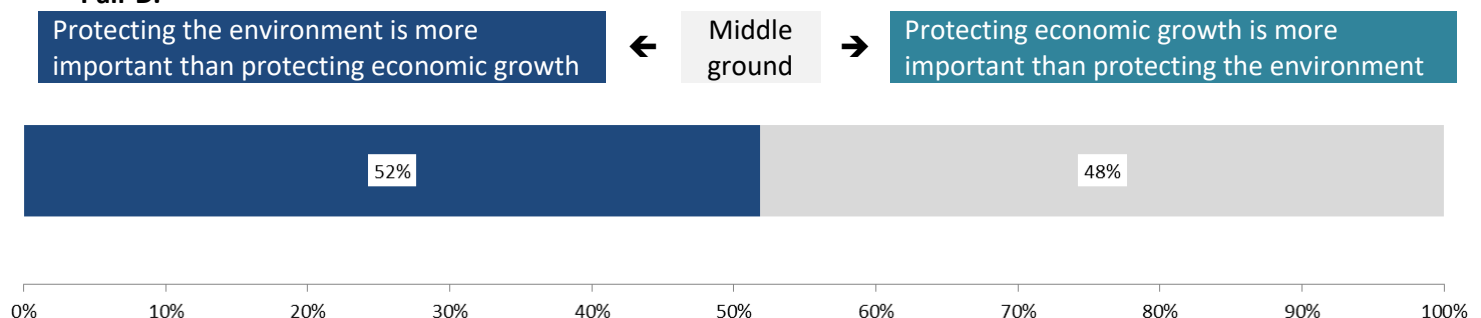
Pair B.



Pair C.



Pair D.





Pair E.

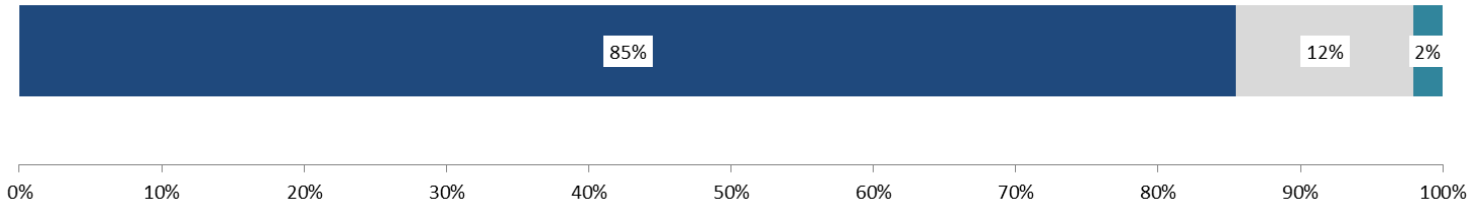
My happiness and quality of life is linked to the environment



Middle ground



My happiness and quality of life is not linked to the environment



Pair F.

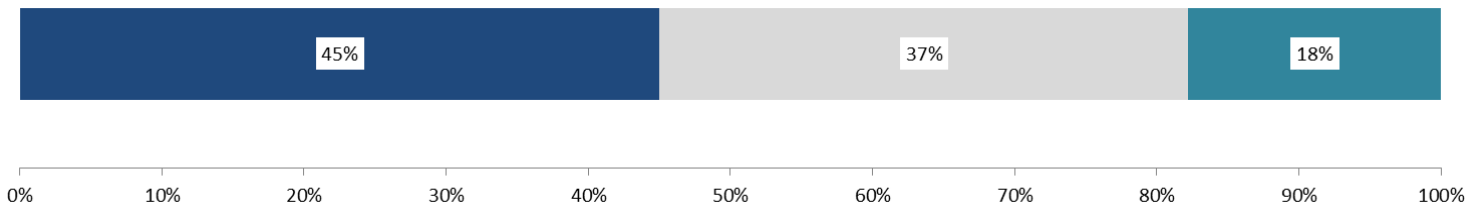
Government should regulate for the sustainable consumption of goods and services



Middle ground



The decision whether to consume goods and services in a sustainable way is a personal choice



Pair G.

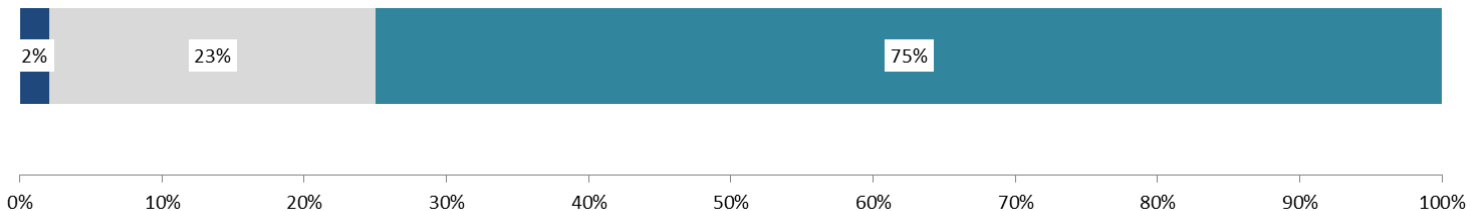
Our economy will only thrive if it's not limited by sustainable management practices



Middle ground



Our economy will only thrive if the environment is sustainably managed



Pair H.

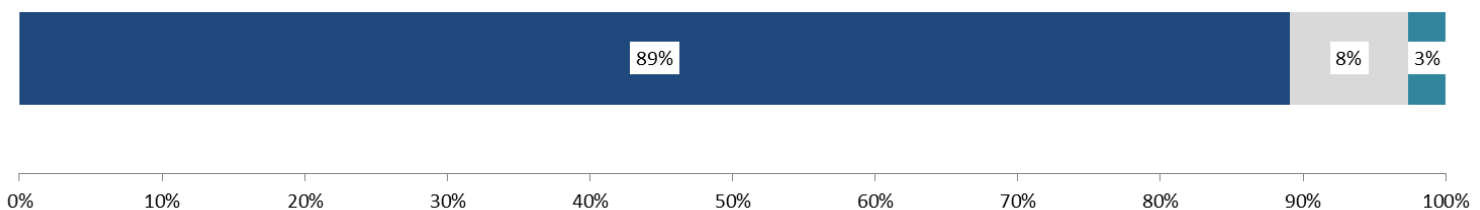
The natural environment is a key element of the national identity and culture of the Islands



Middle ground



The natural environment is unrelated to the national identity and culture of the Islands





An examination of the paired statement preferences highlights a few interesting trends. Response to statement A indicates that respondents seem to be quite evenly split in terms of appropriate instruments to achieve environmental protection, suggesting that a balanced approach between tools like legislation and education and guidance would be the favoured approach. Responses to statements B, C and F suggest that there is an appetite among respondents for additional regulation of human activities and development. Responses to statements D, E and G, suggest that the respondents believe that their quality of life and the economy is strongly dependent on the environment and that the environment should be cared for. This aligns with international trends and reports that indicate that the long-term, sustainable delivery of ecosystem goods and services, which support our well-being and economies, are underpinned by a healthy natural environment. The response to statement H shows that 89% of respondents thought that the natural environment was key to the national identity and culture of the Islands, which reinforces its local importance.

Workshop Results

This section includes the results of 15 workshops with key stakeholders and the general public (Camp and Stanley). The comments (issues and opportunities) captured in the individual workshops were collected and collated into broader issues, categories, sub-themes and themes. These are represented by theme throughout the report in tables and associated radial diagrams.

For example; in Table 9, five main issues and opportunities, e.g. WP1.1a - *Better management of onshore waste and pollution (compared to maritime)*, were discussed by workshop participants that could be categorised as '*better waste management and controls*'. These all related to the broader sub-theme: *Pollution controls and waste management considerations*, along with other categories of issues like *concerns around plastic* or *reduce litter*. The sub-themes and categories are presented in the following diagrams (Figures 21 - 29) and the more detailed issues can be found in the tables by cross-referencing the codes, e.g. WP1.1a.

The diagrams give an overview with the size, or relative weighting, of the segments determined by the frequency at which a particular theme was discussed across workshops as well as the overall number of issues that make up that theme. In other words, if there were several comments under one sub-theme, but these were expressed in only one or two workshops; the segment may not be as large as one where five comments were expressed but these were raised at most of the workshops. The diagrams are intended to present a brief overview of various issues at a glance. Detailed issues for each diagram can be found at the corresponding code within tables.



WASTE AND POLLUTION



Figure 21: The various issues and opportunities identified by workshop participants in relation to waste and pollution. The detailed comments numbered in the outer ring (e.g. WP1.1a) can be found with the corresponding code in Table 9. e.g. WP 1.1a - *Better management of onshore waste and pollution (compared to maritime)*.



Table 9: The various issues and opportunities identified by workshop participants in relation to waste and pollution. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 21.

Waste and Pollution			
Sub-theme	Category	Issue	Code
Pollution controls and waste management considerations	Better waste management and pollution controls	Better management of onshore waste and pollution (compared to maritime)	WP1.1a
		Better waste management and pollution controls (all of Falklands)	WP1.1b
		Tip/waste management in Stanley (concerns about)	WP1.1c
		Disposal of batteries	WP1.1d
		Better waste management/options to deal with waste in Camp e.g. cans, glass, batteries	WP1.1e
	Environmental impacts of current disposal	Concerned about impact of waste/dump on wildlife	WP1.2a
		Pollution from waste disposal (of oceans and coasts)	WP1.2b
		Location of dump further from town (Mary Hill/Eliza Cove) and away from ocean	WP1.2c
	Concerns around plastic	Concerns over burning plastic (in Camp)	WP1.3a
		Concerns around single-use plastic and single-use waste (microplastics)	WP1.3b
	Aesthetic concerns	Aesthetic concerns about waste management (unsightly, impact on tourists)	WP1.4a
		Restoration of private and public rubbish dumps	WP1.4b
		Tidying up area around Sapper Hill (less of a mess)	WP1.4c
	Reduce litter	Fly-tipping (issue)	WP1.5a
		Littering (concerns about) need for more bins and clean-ups	WP1.5b
		Nets over drains to capture plastic waste before sea	WP1.5c
	Instruments to deal with waste and pollution	Incentives (positive or negative) for people to deal with their waste	WP1.6a
		Waste management compliance regime	WP1.6b
		Waste reduction (through changes in consumption)	WP1.6c
		Concerns about cost related to greener consumption changes	WP1.6d
Emissions	Management considerations	Emissions at sea are already regulated	WP2.7a
		We need to manage emissions	WP2.7b
		Worried about fumes from power station and dump	WP2.7c
		Want to see pristine air quality preserved	WP2.7d
		Concerned about oil and oil spills including from boats	WP2.7e
Re-use and recycling	Increase re-use of waste	Encouraging re-use of waste products and industry around re-using waste (circular economy e.g. abattoir/ fertiliser/ composting/industrial composting/fishing, agriculture, food waste)	WP3.8a
		Energy from waste e.g. re-use of energy from burning at tip (power, heating)	WP3.8b
		Re-using/recycling waste metal (e.g. smelting plant, compacting, vehicles and parts)	WP3.8c
	Recycling opportunities	More recycling options/increasing recycling	WP3.9a
		Business opportunity: privatise recycling/whole waste management process/landfill	WP3.9b
Sewerage	Better sewage management	Waste (sewerage) management (issue and opportunity) Stanley, issues of wet wipes	WP4.10a
Challenges specific to Falkland Islands	Challenge of FI location and small size	Challenge of reliance/lack of influence on international supply chains/imports/packaging/manufacturing (e.g. shrink wrap)	WP5.11a



		Cost and carbon footprint of recycling and/or sending waste back to UK (is it worth it?)	WP5.11b
	Imported/external waste concerns	Need to put measures in place to manage tourist waste on return (e.g. masks, sanitiser, gloves etc.)	WP5.12a
		Concerns over dealing with "external" waste e.g. from ships	WP5.12b
		Clean up/reduce marine and fishing waste (e.g. on beaches and in oceans, ghost fishing)	WP5.12c



QUALITY OF LIFE AND HEALTH

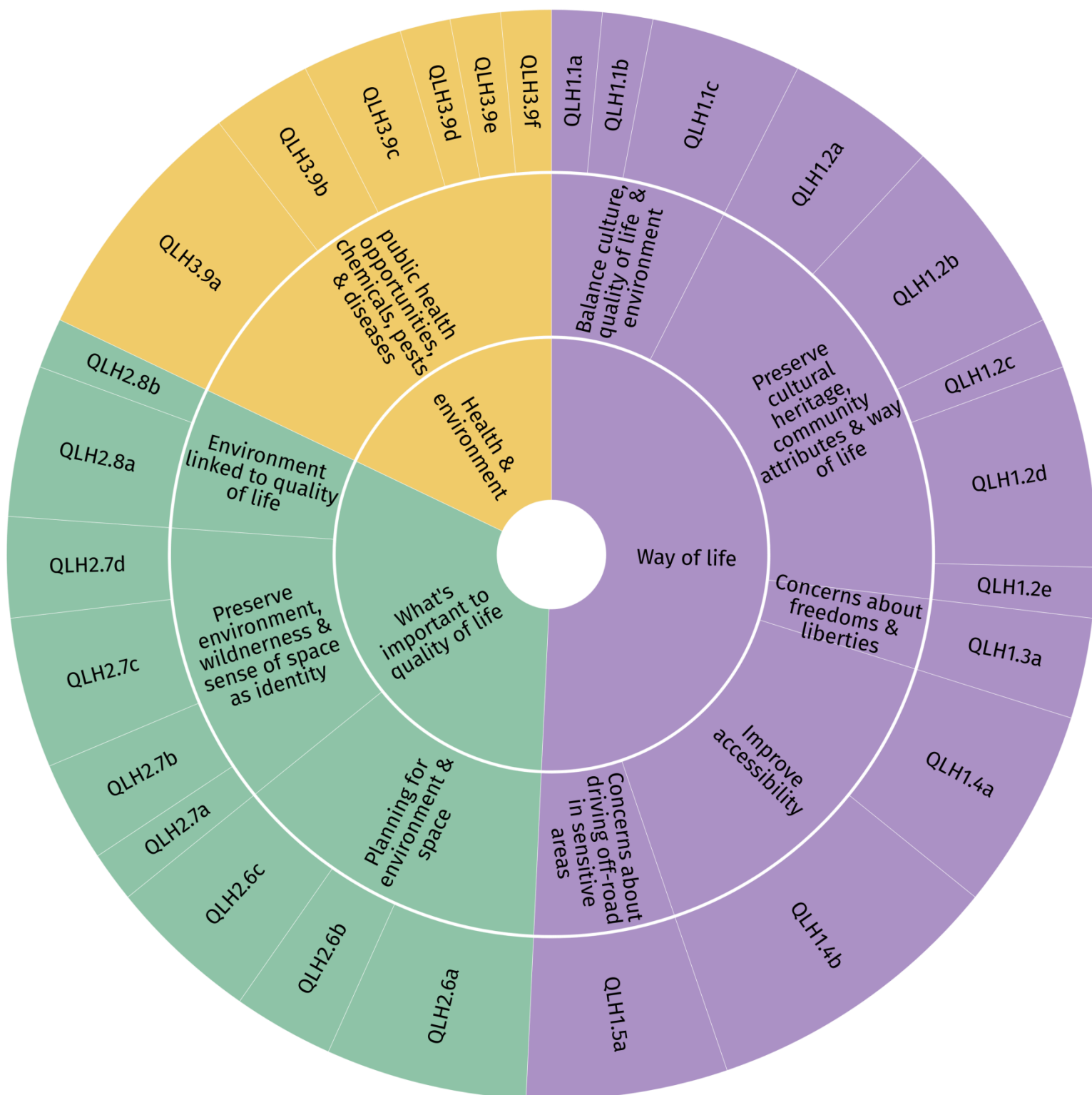


Figure 22: The various issues and opportunities identified by workshop participants in relation to quality of life and health. The detailed comments numbered in the outer ring (e.g. QLH1.1a) can be found with the corresponding code in Table 10.



Table 10: The various issues and opportunities identified by workshop participants in relation to quality of life and health. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 22.

Quality of Life and Health			
Sub-theme	Category	Issue	Code
Way of life	Balance culture, quality of life and environment	Balance cultural assets and environmental needs	QLH1.1a
		Balance between quality of life and environmental needs	QLH1.1b
		Recreational use of land/multi-use public areas (issue/opportunity)	QLH1.1c
	Preserve cultural heritage, community attributes and way of life	Preserve and value (Camp) cultural life, small community spirit, trust	QLH1.2a
		Preserve/manage important built/natural cultural assets and heritage (e.g. historic buildings, maritime history, lighthouse, Bodie Creek Bridge)	QLH1.2b
		Preserve important geological features (stone runs)	QLH1.2c
		Acknowledge and preserve important traditions and customs (e.g. farming traditions, peat cutting, self-sufficiency (veg), subsistence use/collection, off-roading)	QLH1.2d
		More mixed community, cultural events to get all groups integrated	QLH1.2e
	Concerns about freedoms and liberties	Concerns around potential changes to freedoms and liberties for general public	QLH1.3a
	Improve accessibility	Preserve and value freedom/ease of access to natural places	QLH1.4a
		Improve/increase accessibility (paths, trails, shelters, coastline)	QLH1.4b
	Concerns about driving off-road in sensitive areas	Concerns about driving off-road in sensitive areas	QLH1.5a
What's important to quality of life	Planning for environment and space	Preserving space/less crowding around housing and new developments (not ever-smaller plot sizes) e.g. more space for veggie growing	QLH2.6a
		Better use of environmental beauty to make enjoyable spaces for public	QLH2.6b
		A vision for sustainable town development; sustainable Planning	QLH2.6c
	Preserve environment, wilderness and sense of space as identity	Landscapes/nature/environment strongly linked to islands' identity/heritage	QLH2.7a
		Preserve, acknowledge, value Islanders' connection to wilderness, environment, freedom	QLH2.7b
		Preserve and value our proximity to wildlife	QLH2.7c
		Preserve and value sense of space and openness/wildness	QLH2.7d
	Environment linked to quality of life	Quality of life, happiness and health strongly linked to our environment	QLH2.8a
		Consider impact of development on quality of life	QLH2.8b
Health and environment	Public health opportunities, chemicals, pests and diseases	Public health opportunities related to environment (e.g. encouraging more walking, cycling, plant-based diet, grow your own, pesticide-free)	QLH3.9a
		More leisure facilities and opportunities to promote health, fitness and community (athletics track, ice rink, football pitch, astro turf, youth/community groups)	QLH3.9b
		Collect/use medical data for preventative medicine (e.g. UV damage)	QLH3.9c
		UV risk (issue)	QLH3.9d
		Consider bio-security link with pests and diseases	QLH3.9e
		Hospital/emergency services West Falkland	QLH3.9f



ENERGY & NON-RENEWABLE RESOURCES

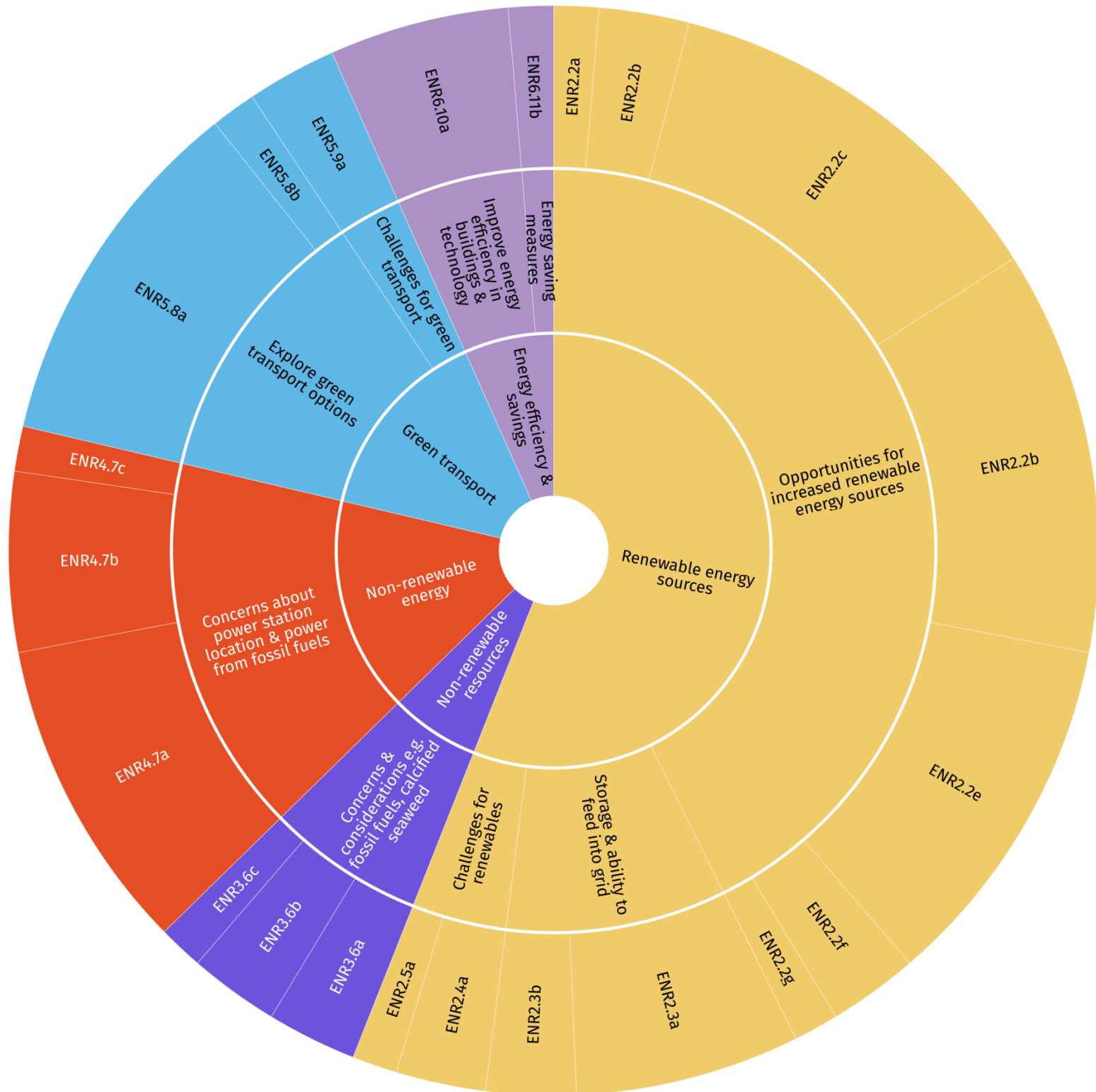


Figure 23: The various issues and opportunities identified by workshop participants in relation to energy and non-renewable resources. The detailed comments numbered in the outer ring (e.g. ENR1.1.a) can be found with the corresponding code in Table 11.



Table 11: The various issues and opportunities identified by workshop participants in relation to energy and non-renewable resources. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 23.

Energy and Non-renewable Resources			
Sub-theme	Category	Issue	Code
Energy source	Energy needs to be reliable	Energy source needs to be reliable	ENR1.1a
Renewable energy sources	Opportunities for increased renewable energy sources	Increasing renewable energy in Fox Bay	ENR2.2b
		Rural sector renewables (micro-grids)	ENR2.2c
		Increased renewable energy; 100% renewable	ENR2.2d
		Wind power opportunities	ENR2.2e
		Solar power opportunities	ENR2.2f
		Wave power	ENR2.2g
		Renewable sources of heat energy needed including in Camp	ENR2.2h
		Solar panels/renewables on domestic properties and ability to feed into grid	ENR2.3a
	Storage and ability to feed into grid	Energy storage and production innovation opportunities	ENR2.3b
	Challenges for renewables	Challenges of storage capacity and windless/sunless days	ENR2.4a
	Current use of renewables	Most of Camp already has renewables (electricity)	ENR2.5a
Non-renewable resources	Concerns and considerations e.g. fossil fuels, calcified seaweed	No/less fossil fuels (less search/extraction)	ENR3.6a
		Environmental considerations around hydrocarbons expansion	ENR3.6b
		Extraction of non-renewable resources (e.g. calcified seaweed, mining, hydrocarbons)	ENR3.6c
Non-renewable energy	Concerns about power station location and power from fossil fuels	Power station (concerns about, desire for more renewables)	ENR4.7a
		Power station should be further from town (fumes)	ENR4.7b
		Issue: fossil fuels are cheap, so we continue to use them instead of alternatives	ENR4.7c
Green transport	Explore green transport options	Explore expansion of green transportation and electric vehicles	ENR5.8a
		Better public transport	ENR5.8b
	Challenges for green transport	Challenges around electric vehicles and need to wait for technology to catch-up, whole lifecycle issues e.g. batteries (environmental impact)	ENR5.9a
Energy efficiency and savings	Improve energy efficiency in buildings and technology	Energy efficiency measures in existing and new buildings, improved construction energy efficiency standards s (e.g. light bulbs, insulation)	ENR6.10a
	Energy saving measures	Encourage energy-saving measures e.g. auto-lights, turning off the lights	ENR6.11b



OCEANS AND COASTS



Figure 24: The various issues and opportunities identified by workshop participants in relation to oceans and coasts. The detailed comments numbered in the outer ring (e.g. OC11.1a) can be found with the corresponding code in Table 12.



Table 12: The various issues and opportunities identified by workshop participants in relation to oceans and coasts. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 24.

Oceans and Coasts			
Sub-theme	Category	Issue	Code
Protections for the marine environment	Increase protections including protected areas	Protection of the marine environment/areas (biodiversity/seascapes)	OC1.1a
		Cleaner ocean	OC1.1b
		More regulation/legislation for marine environment	OC1.1c
	Protect/maintain inshore ecosystems	Framework for recognising and legally protecting inshore (of 3nm) waters	OC1.2a
		Maintain inshore ecosystems (e.g. kelp forest)	OC1.2b
Fisheries and renewable marine resources	Sustainable marine and fisheries management	Need for sustainable decision-making for oceans and coasts	OC2.3a
		Sustainable use/preventing over-exploitation of renewable marine resources (e.g. fisheries)	OC2.3b
		Managing marine environment to ensure sustainable fisheries - keeping nature in balance	OC2.3c
		Consider whether expansion of fisheries is necessary – would probably not like to see more	OC2.3d
		No deep sea trawling	OC2.3e
		Try to prevent bycatch	OC2.3f
		Ecosystem approach to fisheries management	OC2.3g
	Regional fisheries co-operation	Regional fisheries co-operation	OC2.4a
Aquaculture	Economic potential and planned development	Aquaculture - robust, objective assessment of economic potential	OC3.5a
		Aquaculture should be a planned development - low impact, high revenue	OC3.5b
	Need balanced view on aquaculture	Need for balanced information on "both sides" (pros and cons)	OC3.6a
	Concerns about impacts and responsible management	Concerns about social , aesthetic, environmental impact of large-scale salmon farming	OC3.7a
		Aquaculture - responsible management	OC3.7b
Knowledge	Increase knowledge of marine environment	Better understanding of marine environment (e.g. ecosystem function)	OC4.8a
	Lack of knowledge of marine invasives	Lack of knowledge of marine invasives and their impact (ecological and economic)	OC4.9a
Safety and Environmental controls at sea	Licensed and safe boats	Making sure boats are licensed and safe	OC5.10a
Other	More whales, dolphins and sailing boats	Protect/more turtles, whales, orcas, dolphins	OC6.11a
		More sailing boats	OC6.11b



LAND AND FRESHWATER



Figure 25: The various issues and opportunities identified by workshop participants in relation to land and freshwater. The detailed comments numbered in the outer ring (e.g. LF1.1a) can be found with the corresponding code in Table 13.



Table 13: The various issues and opportunities identified by workshop participants in relation to land and freshwater. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 25.

Land and Freshwater			
Sub-theme	Category	Issue	Code
Land management	Better practices that balance environment and income	Balance between farming, animal/land management practices and environmental measures; balance between sustainable income and farming practices	LF1.1a
		Better land management practices, stock management, over-grazing, reinvestment, how land is valued	LF1.1b
		Opportunity to fence off areas and not allow grazing	LF1.1c
	Improve planning and decision-making for	Government should be more proactive on land management (not just responsive) e.g. guidance, advice	LF1.2a
		Planned approach to land management	LF1.2b
		Better decision-making process for land-use change or development in Camp	LF1.2c
	Financial mechanisms to promote better land use	Financing (grants) and other mechanisms to promote better land use	LF1.3a
	Financially self-sustaining agriculture	Financially self-sustaining agriculture (sheep farming)	LF1.4a
	Increase agricultural production	We need more sheep for food, wool	LF1.5a
Invasive species and biosecurity	Better awareness and management of	Appropriate invasive species management (joined-up approach) and bio-security	LF2.6a
		Increased awareness of invasives (including marine), recognition, education, citizen science	LF2.6b
		Investment in bio-security measures	LF2.6c
	Create/care for invasive free islands	Invasive-free islands (care for/create)	LF2.7a
Fire management	Intentional burning practice concerns	Concerns about intentional burning damaging land	LF3.8a
		Better awareness around burning/reseed practices	LF3.8b
	Increase wildfire awareness and management in Camp	Fire risk in Camp	LF3.9a
		Better communication around fire risk/fire prevention	LF3.9b
		Need for better wildfire management practices	LF3.9c
		Has been a lot of communication/initiative from fire department	LF3.9d
		Erosion and smothering concerns	Erosion/decreasing land cover
Erosion and vegetation changes	Silt blowing from eroded/dried out areas and smothering vegetation	LF4.10b	
	Concerns about ecosystem and vegetation changes	Ecosystem and vegetation changes are evident (think possibly linked to climate change?)	LF4.11a
	Restoration	Challenges to increasing the area of restoration	Challenge of large scale on farms for land management and/or restoration
Access to resources for restoration e.g. Tussac seedlings			LF5.13a
Funding for habitat restoration			LF5.13b
Restoration doesn't always work		Restoration doesn't work everywhere e.g. Tussac planting - mixed success	LF5.14a
Restoration opportunities for multiple habitat types		Would like to see large-scale areas restored	LF5.15a
		Want more options/habitat types for restoration (e.g. not just Tussac)	LF5.15b
		Increased/opportunities around restoration (Tussac planting)	LF5.15c



	Not just restoration; address underlying issues	Not just restoration alone - need to address underlying issues e.g. grazing, land drying out, climate change	LF5.16a
Water management	Concerns about land drying out, rainfall patterns	Land drying out (decreased soil moisture, peat shrinkage)	LF6.17a
		Rainfall/precipitation (concerns about changes to, evaporation)	LF6.17b
		Land does not support as many stock as in the past (possibly drying out?)	LF6.17c
	Concerns about quality and quantity of water	Quality and quantity of drinking and freshwater	LF6.18a
	Improve (long-term) water management	Investigate/apply water retention measures (irrigation, boring, stock movement changes, growing high grass, issues around ditching)	LF6.19a
		Water management (long-term, sustainability)	LF6.19b
		Capturing and re-using grey water, rain water harvesting (innovation and investment)	LF6.19c
Aquatic ecosystems	Need for more emphasis on aquatic ecosystems	Consideration/more emphasis on aquatic ecosystems on land e.g. wetlands	LF7.20a
		Protect the ponds (wetlands)	LF7.20b
Challenges to improving land and freshwater environments	Limited capacity/resourcing on private farms for implementation	Challenge of capacity/resourcing on private farms to implement environmentally-friendly measures such as solar installation (e.g. people, time, expertise)	LF8.21a
	Some environmental damage cannot be reversed	Acknowledge/understand that some environmental damage cannot be reversed, not realistic to keep land totally pristine, land is already not pristine	LF8.22a
Problem native species	Management of	Problem native species management (e.g. vultures)	LF9.23a
Other	More ducks, flowers, plants	Protect/plant trees - don't cut down	LF10.24a
		More ducks	LF10.24b
		More flowers	LF10.24c
	Dogs scare wildlife	Dogs scare wildlife	LF10.25a



SUSTAINABLE ECONOMIC DEVELOPMENT



Figure 26: The various issues and opportunities identified by workshop participants in relation to sustainable economic development. The detailed comments numbered in the outer ring (e.g. SED1.1a) can be found with the corresponding code in Table 14.



Table 14: The various issues and opportunities identified by workshop participants in relation to sustainable economic development. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 26.

Sustainable Economic Development			
Sub-theme	Category	Issue	Code
Managing environmental impact	Population growth leads to increased environmental impact	Growth of Stanley/population increasing environmental impacts (power, sewage, waste, tip, carbon footprint)	SED1.1a
	Sustainable/environmentally responsible economic development	Environmentally responsible economic development	SED1.2a
		Economic development should be sustainable and responsible (modernise without damaging environment and way of life/remoteness/small community)	SED1.2b
		Economy/industry dependent on "healthy" environment/strong link between	SED1.2c
	Concerns for managing impact of future industry	Concerns about impact, effective regulation and enforcement for future industry e.g. aquaculture, hydrocarbons	SED1.3a
	Promote economic benefits of good environmental practice	Businesses need to see financial benefit to make environmental measures work (e.g. expanding grants)	SED1.4a
		Communicate economic benefits of environmental measures (FIG)	SED1.4b
	Promote pro-environment practice through Planning and Building	Role of Planning (and Building Services) regime, decisions, guidance, regulations, standards (environmental considerations e.g. energy efficiency)	SED1.5a
	Need for environmental auditing/credentials for business	Environmental credential schemes/need for auditing and accountability for businesses' sustainability measures and government	SED1.6a
	More sustainable supply chains	More sustainable supply chains	SED1.7a
Limits to growth and development	Is future economic growth necessary?	Consider whether further economic growth is necessary or whether we can maintain current state	SED2.8a
	Avoid mass production / heavy industrialisation	Not to see Stanley become a place with a lot of factories that would ruin ecosystems	SED2.9a
		Don't want mass production because we are the opposite of this (rural community) otherwise we wouldn't be the Falklands	SED2.9b
Environmental interactions and cumulative impacts	Environmental interactions of industries	(Negative) impacts of one industry on another operating through environment (e.g. tourism impacted by fisheries and vice-versa)	SED3.10a
		Strategic approach needed to manage cumulative impacts on environment (e.g. from multiple industries)	SED3.10b
Future economic activity and prosperity	Not undermining economic activity	Not undermining existing and future (sustainable) economic activity	SED4.11a
		Prioritise sustainable economic development	SED4.11b
		Respect environment, but hardline on maintaining economy	SED4.11c
	Develop local business for economic growth	More shops restaurants (business) and more jobs in Stanley to develop economy and quality of life	SED4.12a
	Recognise opportunities from economic development for environment	Recognising benefits of economic development and opportunities for the environment e.g. acquiring data for the environment	SED4.13a
	Concerns about impact of environmental measures on industry	Concerns about the administrative/regulatory/costs burdens of additional environmental measures (on industry incl. tourism)	SED4.14a
	Need to diversify economy	Diversify economy (strategically)	SED5.15a



Long term, strategic view	Risks of un-diverse economy	Diversify agriculture industry (into emerging markets)	SED5.15b
		Risks of un-diverse economy (3 key industries only)	SED5.16a
		Concerned about economic reliance on resource-heavy industry (now and in future)	SED5.16b
	Take long-term view to investment and economic development	Consideration of long-term (whole life-cycle) vs short term investment	SED5.17a
		Long-term local development (inward investment)	SED5.17b
Rural (economic) development	Desire for growth in Camp	Infrastructure development in Camp (e.g. tarmac roads)	SED6.18a
		More larger settlements/more people (not just expanding Stanley)	SED6.18b
		Better goods and services in Camp -more businesses	SED6.18c
	Infrastructural growth to promote development	Development of berthing facilities/marina for non-cruise-ship vessels will grow other industries e.g. land-based tourism, repairs etc.	SED6.19a
		Future infrastructure for transportation including supply	SED6.19b
		Improve internet infrastructure and capacity	SED6.19c
Falkland Islands perspective	Challenge of remote location for economy	Challenges of remote location/accessibility e.g. air travel, waste, flight connectivity	SED7.20a
	Opportunity of small population size for change	Opportunity of small population size, smallish land-mass to implement change (nimble)	SED7.21a
	Opportunities for local food production and import substitution	Development of local alternatives for products (import substitution) e.g. veg, dairy etc.	SED7.22a
		Increased local vegetable production	SED7.22b
		More opportunities for organic farming; less pesticide use	SED7.22c
Tourism and the environment	Industry increasingly environmentally aware	Tourists increasingly conscious of environmental issues	SED8.23a
		Increasing international industry focus on accreditation and environmental credentials	SED8.23b
	Encourage environmentally friendly tourism	Encourage high-end eco-tourism/sustainable tourism	SED8.24a
		Opportunity for voluntourism	SED8.24b
		Land-based tourism (high-end, increasing expenditure, not numbers)	SED8.24c
		Encourage local tourism	SED8.24a
		Tourism focused on environmentally-friendly companies and options	SED8.24b
		Local Green Seal programme exists with opportunities to promote environmental considerations	SED8.24c
	Concerns over mass tourism	No mass tourism; not exceed environmental carrying capacity	SED8.25a
		Concerns about large numbers of tourists in particular areas and need to spread them out/limit numbers	SED8.25b
	Manage environmental impact of tourism	Legislation regarding sustainable tourism	SED8.26a
		Protection for wildlife from tourism	SED8.26b
		Consider implications of different types of tourism on environment	SED8.26c
		Ensure tourists know how to respect environment and wildlife (communication)	SED8.26d
	Water limitations in Camp	Water limitations/concerns and impact on tourism development (Camp)	SED8.27a



CROSS-CUTTING CONSIDERATIONS



Figure 27: The various issues and opportunities identified by workshop participants in relation to cross-cutting considerations. The detailed comments numbered in the outer ring (e.g. CC1.1a) can be found with the corresponding code in Table 15.



Table 15: The various issues and opportunities identified by workshop participants in relation to cross-cutting considerations. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 27.

Cross-cutting Considerations			
Sub-theme	Category	Issue	Code
Considerations for the Falkland Islands	Focus on FI context and needs	Falkland Islands focus (context and needs; realistic/achievable in FI context)	CC1.1a
	Follow international examples	Follow international examples/best practice	CC1.2a
	International pressures interact with local need	How international pressures interact with local need	CC1.3a
	Uphold local and international commitments	FI to make proportionate contribution to global efforts to tackle environmental issues	CC1.4a
		International and local environmental commitments made/upheld (important reputational impacts)	CC1.4b
	Consider Camp and Stanley	Camp/Stanley balance (re: environmental management)	CC1.5a
Considerations for the Environment Strategy	Resourcing for Strategy and associated actions	Strategy needs to be resourced (by FIG); environment function better resourced	CC2.6a
		Resourced enforcement/management (of policies/regulations) to ensure outcomes	CC2.6b
	Suite of instruments to deal with environmental issues and goals	Financial mechanisms/incentives for implementation of government environmental priorities (e.g. land management, energy)	CC2.7a
		Not just about financial mechanisms, need to consider other barriers	CC2.7b
		Actions/management/advice to deal with environmental issues e.g. land management	CC2.7c
		Need more environmental regulation/legislation	CC2.7d
	Should be across government and community	Strategy should be joined-up, whole of government including in implementation e.g. across all Directorates, agencies, regulators etc.	CC2.8a
		Strategy should look to pool resources (e.g. BFSAI, MOD)	CC2.8b
		Mainstreaming: environmental visions incorporated into all government decisions and actions (e.g. capital resource plan, spending, committee-work (suggestion of environment representative), technical advisory groups etc.)	CC2.8c
	Needs to take a long-term perspective	Continuity - need for a cohesive, long-term approach that spans assemblies, FIG staff turnover etc.	CC2.9a
		Long-term, uninterrupted funding mechanisms/support from government for environment	CC2.9b
		Time will be needed to implement change	CC2.9c
	Need for continuity within government and society	Handover (continuity) - passing along information and initiatives, ensure they get carried over	CC2.10a
		Continuity - questions around future societal support (will enthusiasm wane over time?)	CC2.10b
	Should be a living document	Strategy should not be static/set in stone; living document	CC2.11a
	Implementation should begin immediately	Need to see strategy ambitions immediately reflected in current practice (actions)	CC2.12a
	Overcome attitudinal challenges for successful implementation	Consider general public resistance to change/risk aversion in implementation	CC2.13a



	Communicate with stakeholders	Need for ongoing communication with stakeholders as strategy develops	CC2.14a
Governance considerations	Government leading the way for environment	Government should be pro-active (leadership, direction, lead by example), rather than reactive (following others)	CC3.15a
		Government-owned farms should be leading the way on wildlife and access	CC3.15b
		Government green practice (more broadly, FI living up to green credentials, clear accountability for government)	CC3.15c
	Balanced, evidence-based decision making	Decision-making should be evidence-based	CC3.16a
		Balanced approach to government decisions e.g. environment and economy considered as one (equal attention); consider conflicting environmental uses	CC3.16b
	Holistic cost-benefit analysis approach	Taking a holistic/whole lifecycle cost-benefit analysis approach to technology, policies, solutions e.g. harmful batteries in electric cars, shipping waste over long distances	CC3.17a
Climate Change	Need emissions inventory	Climate change: emissions inventory (CO2, GHGs)	CC4.18a
	We are net receivers not net creators of	Climate change: receivers not creators	CC4.19a
	Concerns about impacts of	Climate change: water/drying out	CC4.20a
		Climate change: fire risk	CC4.20b
		Climate change issues: ocean warming, sea level rise, climate crises, harmful algal blooms, el ninos, weather pattern changes	CC4.20c
	Adaptation and mitigation for	Climate change: adaptation, planning for climate change and mitigation (informed action)	CC4.21a
	Carbon targets	Carbon targets/net zero/carbon neutral	CC4.22a
Carbon Offsetting	Explore the possibility of	Carbon offsetting/carbon capture as financial opportunity for FI economy	CC5.23a
		Government should research the possibility of carbon offsetting	CC5.23b
		Carbon capture and storage (offshore and onshore) as environmental opportunity (planting)	CC5.23c
	Concerns about potential negative side of	Concerns about lifespan, long-term socio-economic sustainability and implications of relying on carbon offsetting	CC5.24a
	Challenges to implementing it properly	Challenges for carbon offsetting (e.g. frameworks to support, how and where, conforming to international standards)	CC5.25a
Biodiversity Protection/ Management	Increase environmental protections and management	Protection of land/fragile areas/legislative protection (to combat biodiversity loss)	CC6.26a
		Regulatory mechanism and appropriate management for vulnerable habitats	CC6.26b
		Care for animals/unique wildlife/birdlife/habitats	CC6.26c
	Increase protection of areas	Protection of ecologically important areas e.g. coastal verges/habitats/corridors/sand dunes	CC6.27a
		More protected areas	CC6.27b
	Protect biodiversity	Biodiversity loss/promotion	CC6.28a
	Increase resourcing of environmental management	Funding (resourcing, management) for wildlife protection e.g. protected areas, including marine	CC6.29a
Recovery of natural environment	Recovery and promotion of natural environment	Ecologically/socially/economically important areas and species restored and recovered	CC7.30a
		Recovery of endangered/threatened species (native)	CC7.30b
		Collect and plant more native seeds	CC7.30c



COMMUNICATION AND EDUCATION



Figure 28: The various issues and opportunities identified by workshop participants in relation to communication and education. The detailed comments numbered in the outer ring (e.g. CE1.1a) can be found with the corresponding code in Table 16.



Table 16: The various issues and opportunities identified by workshop participants in relation to communication and education. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 28.

Communication and Education			
Sub-theme	Category	Issue	Code
Communication and accessibility of information	Consistent messaging from government	Consistent communication and messaging from across government	CE1.1a
	Better communication and sharing of information by all	Better communication/sharing of existing science, research, work and data - joined-up approach, scale up where needed	CE1.2a
		Data-sharing between industries	CE1.2b
		Better accessibility (management) of data/science/knowledge	CE1.2c
Environmental stewardship	Encourage community with education, communication or other programmes	Education and engagement to enrich community and encourage environmental stewardship	CE2.3a
		Educating and incentivising consumers to encourage personal responsibility (e.g. environmentally- friendly products)	CE2.3b
		Encouraging education and attitude changes to environment (should be a two-way street, learn and listen from community)	CE2.3c
		Encourage stewardship opportunities and corporate social responsibility - government and industry included; build on existing community spirit	CE2.3d
		Incorporate more FI environment/cultural heritage into curriculum	CE2.3e
		Good for public to see/get to know more of Falkland Islands (Camp) e.g. TRIP scheme	CE2.3f
Government and the public	Empower community to take proactive role for environment	Empowerment/enabling of population (Camp, land-owners) to take care of things themselves	CE3.4a
		Enabling community actions through machinery, advice, labour etc. (e.g. not just funding)	CE3.4b
	Encourage public to engage in decision-making process	Empowering people to make more use of existing opportunities to have a say on the environment e.g. Environment Committee	CE3.5a
		Better public engagement in decision-making	CE3.5b
	Concerns of over-interventionist policies/control	Concerns that individuals will lose control; successful intervention is offering help and assistance, not telling people what to do	CE3.6a



SCIENCE AND INNOVATION



Figure 29: The various issues and opportunities identified by workshop participants in relation to science and innovation. The detailed comments numbered in the outer ring (e.g. SI1.1a) can be found with the corresponding code in Table 17.



Table 17: The various issues and opportunities identified by workshop participants in relation to science and innovation. Similar issues and opportunities have been grouped into categories and similar categories have been grouped into sub-themes. Corresponds to Figure 29.

Science and Innovation			
Sub-theme	Category	Issue	Code
Exploring innovation opportunities	Increase horizon scanning and future-proofing	Horizon scanning/looking ahead	SI1.1a
		Future-proofing (e.g. major developments)	SI1.1b
		Looking at what already works elsewhere/internationally, rather than starting from scratch (including incentives, regulation, environmental impacts)	SI1.1c
	Explore and increase innovative industry, technology and practices	Actively explore new technologies and industries (which may be environmentally-friendly); embrace technology and innovation	SI1.2a
		Make more use of remote sensing tools (e.g. for land management)	SI1.2b
		Sustainable housing development using local materials and innovation e.g. wool for insulation	SI1.2c
		Better knowledge of and innovation for terrestrial (land) environment	SI1.2d
	Investigate performance of locally-adopted innovation	Investigating performance of locally-adopted innovation (e.g. electric cars)	SI1.3a
	Science and innovation should make sense locally	Use science/innovation that is relevant to the small scale of islands	SI1.4a
		Science/innovation applied to stock and land management and issues around land	SI1.4b
		Science/innovation should be appropriate to industry	SI1.4c
Challenges for innovation	Challenges to implementing innovation, e.g. risk-aversion	Acknowledge/combat challenges to implementing new technologies (risk-averse attitude, labour force/skills for maintenance, small population, national infrastructure capacity)	SI2.5a
	Encourage openness to new ideas/overcome risk-aversion	Overcome risk-aversion to new technologies through encouragement, use, investment	SI2.6a
		Openness to new ideas (innovation)	SI2.6b
Research and skills	Promote local research and innovation including through government and funding	Government should have a greater role in driving/directing/funding research and innovation	SI3.7a
		Continued and increased research and innovation around the environment	SI3.7b
		More local and international funding for the environment, science, innovation, and conservation	SI3.7c
		Regional research hub (Gateway)	SI3.7d
	Local skills development to support innovation	Education and encouragement for careers in science and innovation/"green industries"/STEM	SI3.8a
		Focus on developing local skills, training, education, especially for emerging technologies	SI3.8b
Increased data and monitoring	Need for better baseline data and long-term monitoring	Need for baseline data on ecosystems	SI4.9a
		Integrated, long-term monitoring (and financing for monitoring)	SI4.9b
		Opportunity for cyclical weather information (long-term data)	SI4.9c



Our Future and the Falkland Islands' Natural Environment: Consultation seeking public opinion to inform the creation of an Environmental Strategy for the Falkland Islands

Consultation topic:	This consultation asks your views on the Falkland Islands' environment, which will help inform the creation of an Environmental Strategy for the Falkland Islands. It is an introductory survey to measure broad attitudes to environmental issues early on, as opposed to testing public opinion on policy proposals. There will be further engagement and consultation opportunities further along in the process. The Environmental Strategy will influence policy for years to come - this is your opportunity to have your say about what is important to you, so that we can all shape the future of our environment together.
Target population:	This strategy is important for the Falkland Islands as a whole. We welcome responses from everyone who lives in the Islands, whether you live in Stanley, Camp, the Outer Islands or MPC.
Duration:	This consultation will run for 3 weeks from 18 February to 14 March 2021. It should take you approximately 10 minutes to complete.
How to respond:	There are two ways you can respond to this consultation: 1) The quickest and easiest way is to complete the online survey, available at www.fig.gov.fk/policy/consultations 2) If you prefer, you can complete a paper version available from the Post Office, or you can ask for one to be posted to you by contacting us on 28449 or by email: environmental.assistant@sec.gov.fk Completed paper surveys can be placed in the dedicated response box in the Post Office, or can be posted to: Environment Department, The Secretariat, Stanley
Enquiries:	If you have any queries about the consultation, please contact: Environment Department, The Secretariat, Stanley Phone: 28449 email: environmental.assistant@sec.gov.fk

Introduction

The Falkland Islands' natural environment plays an important role in our lives, and provides a livelihood for many in our community. In recognition of this, and as called for in The Islands Plan 2018 – 2022, the Environment Department is developing an Environmental Strategy for the Falkland Islands to manage and protect our natural environment for future generations. The Environment Strategy will set out the issues, opportunities and goals of the Falkland Islands related to such environmental topics as sustainable development, land and freshwater, oceans and coasts, energy, quality of life and health, waste and pollution, as well as cross-cutting global topics like biodiversity and climate change. It will help us to focus our efforts and actions for managing our environment for years to come.

A lot of scoping work has already been done to understand our progress in caring for our natural environment. This involves understanding global opportunities and challenges, and how these relate to the Falkland Islands, with its unique way of life, landscapes, seascapes and wildlife. This baseline survey is designed to measure broad attitudes to environmental issues rather than seeking opinion on policy options. There will be further engagement/consultation opportunities through the strategy development process.



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It is important to get the input of the community at this stage of the process - the Falkland Islands' future belongs to its people, so it is vitally important that we hear from the people who live here to learn what is most important to *you*, so that we can plan our future together.

1. Imagine the natural environment of the Falkland Islands in 2040 compared to now:

What do you hope you will see?

What do you hope you will not see?

What do you hope will stay the same?

What do you hope will change?

2. In your opinion, what are the **three biggest environmental issues** in the Falkland Islands, including its waters? If you don't think there are any issues, please leave it blank.

1.
2.
3.



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3. Do you think there are any opportunities we aren't taking advantage of in the natural environment in the Islands? This can relate to ecological, social, economic or any other opportunities.

☐

Yes

☐

No

☐

Unsure

4. If you think there are missed opportunities, what things do you think could be developed?

5. Do you think the Falkland Islands right now has:

☐

Not enough environmental regulation

☐

The right amount of environmental regulation

☐

Too much environmental regulation

☐

Don't know/unsure

6. The list below identifies some potential areas of focus related to waste management in the Islands.

Please only tick the ones which you think are important for the Falkland Islands.

☐

Increasing sewage treatment

☐

Reducing/removing single use plastics

☐

Encouraging use of products that are biodegradable

☐

Managing household waste

☐

Increasing recycling

☐

Managing industrial/commercial waste

If you think there are other areas to focus on in relation to waste management, please provide details below:



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7. Do you think the Falkland Islands should set clear targets in relation to waste management?

☐

Yes

☐

No

☐

Unsure

8. If more of your household waste could be recycled e.g. paper and cardboard, plastics, batteries, would you be willing to pay a higher service charge?

☐

Yes

☐

No

☐

Unsure

9. The list below identifies some potential areas of focus related to pollution control in the Islands.

Please only tick the ones which you think are important for the Falkland Islands.

☐

Managing air pollution

☐

Managing industrial/commercial pollution

☐

Managing pollution in the ocean

☐

Managing pollution on land and in freshwater

If you think there are other areas to focus on in relation to pollution control, please provide details below:

10. Do you think the Falkland Islands should set clear targets in relation to pollution control?

☐

Yes

☐

No

☐

Unsure

11. The list below identifies some potential areas of focus related to wildlife and nature in the Islands.

Please only tick the ones which you think are important for the Falkland Islands.

☐

Protecting our biodiversity

☐

Protecting and/or managing special areas of land and wetlands

☐

Protecting and/or managing special areas of ocean

☐

Protecting and/or managing ecologically important areas

☐

Protecting and/or managing important, rare or threatened species

☐

Managing the introduction and spread of invasive species

☐

Managing the sustainable collection/harvesting of species

☐

Research on the natural environment

☐

Protecting cultural heritage



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If you think there are other areas to focus on in relation to wildlife and nature, please provide details below:

12. Do you think the Falkland Islands should set clear targets in relation to wildlife and nature?

☐

Yes

☐

No

☐

Unsure

13. The list below identifies some potential areas of focus related to minerals, and sources and usage of energy in the Islands. **Please only tick the ones which you think are important for the Falkland Islands.**

☐

Generation and use of renewable energy sources

☐

Extraction and use of non-renewable resources onshore

☐

Extraction and use of non-renewable resources offshore

☐

Continued generation and use of non-renewable energy sources

☐

Energy efficiency (including insulation and energy efficient products)

If you think there are other areas to focus on in relation to minerals and energy, please provide details below:

14. Do you think the Falkland Islands should set clear targets in relation to minerals, energy use and energy sources?

☐

Yes

☐

No

☐

Unsure



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15. The list below identifies some potential areas of focus related to global climate change.

Please only tick the ones which you think are important for the Falkland Islands.

- ☐ Energy production
- ☐ Greenhouse gas emissions
- ☐ Natural hazards from climate change e.g. increased fire risk
- ☐ Changes to weather patterns, including temperature and rainfall
- ☐ Changes to soil moisture conditions e.g. land drying out
- ☐ Changes to the natural environment from climate change e.g. vegetation, the distribution of plants/animals
- ☐ Changes in the spread of pests and diseases related to climate change
- ☐ Extinctions as a result of climate change
- ☐ Sea-level rising
- ☐ Adapting to and coping with climate change

If you think there are other areas to focus on in relation to climate change, please provide details below:

16. In addition to the international targets we are obliged to meet, do you think the Falkland Islands should set clear targets in relation to mitigating the effects of climate change?

☐ Yes

☐ No

☐ Unsure

17. Review the following statement pairs and tick which one you are more inclined to agree with. If you agree more with the statement on the left, tick the left box. If you agree more with the statement on the right, tick the right box. If you prefer a compromise between each pair of statements, tick the 'Middle ground' box.

	←	Middle ground	→	
Using education and guidance to achieve protection of the environment	☐	☐	☐	Using legislation and regulations to achieve protection of the environment
Freedom to enjoy activities across all areas in the Islands with a risk of harm to the environment in some areas	☐	☐	☐	Restrict activities in certain environmentally important areas of the Islands to reduce risk of harm to the environment
Help protect the environment through a high degree of regulation of business and industry	☐	☐	☐	Help protect the environment through light touch regulation of business and industry



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If you agree more with the statement on the left, tick the left box. If you agree more with the statement on the right, tick the right box. If you prefer a compromise between each pair of statements, tick the 'Middle ground' box.

	←	Middle ground	→	
Protecting the environment is more important than protecting economic growth	☐	☐	☐	Protecting economic growth is more important than protecting the environment
My happiness and quality of life is linked to the environment	☐	☐	☐	My happiness and quality of life is not linked to the environment
Government should regulate for the sustainable consumption of goods and services	☐	☐	☐	The decision whether to consume goods and services in a sustainable way is a personal choice
	←	Middle ground	→	
Our economy will only thrive if it's not limited by sustainable management practices	☐	☐	☐	Our economy will only thrive if the environment is sustainably managed
The natural environment is a key element of the national identity and culture of the Islands	☐	☐	☐	The natural environment is unrelated to the national identity and culture of the Islands

18. How long have you lived in the Falkland Islands?

- | | |
|---|---|
| ☐ Less than 1 year | ☐ 11 – 20 years |
| ☐ 1 – 5 years | ☐ More than 20 years |
| ☐ 6 – 10 years | |

19. I spend most of my time living in:

- | | |
|--|--|
| ☐ Stanley | ☐ An Outer Island |
| ☐ East Falkland | ☐ MPC |
| ☐ West Falkland | |

Other, please specify: _____

20. My age is:

- | | | |
|----------------------------------|----------------------------------|----------------------------------|
| ☐ 16 – 18 | ☐ 36 – 45 | ☐ Over 65 |
| ☐ 19 – 25 | ☐ 46 – 55 | |
| ☐ 26 – 35 | ☐ 56 – 65 | |



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21. My main job is in the following sector (please tick one):

- ☐ Not applicable
- ☐ Agriculture
- ☐ Business Services
- ☐ Communications
- ☐ Conservation / Environmental Protection
- ☐ Finance
- ☐ Construction
- ☐ Fishing
- ☐ Government (Public Sector)
- ☐ Hospitality i.e. Hotels & Guest Houses, Restaurants & Cafes, Pubs & Bars
- ☐ Land Transport
- ☐ Ancillary Transport e.g. Stevedoring, Cargo Preparation etc.
- ☐ Marine Services
- ☐ Mining & Quarrying
- ☐ Oil & Gas or Oil & Gas Services
- ☐ Real Estate
- ☐ Retail
- ☐ Tourism
- ☐ Other, please specify: _____

Thank you for taking part in this consultation.

If you are happy to be contacted in relation to your responses,
please provide your contact details below:

Name: _____

Email address: _____

Phone number: _____



Appendix 2: Workshop participants

Fifteen workshops were hosted with members from the following groups:

ACAP representative
British Forces South Atlantic Installation
Chamber of Commerce
Falklands Conservation
Falklands Islands Community School
Falkland Islands Development Corporation
Falkland Islands Fishing Companies Association
Falkland Islands Petroleum Licensees Association
Falkland Islands Tourist Association
Falkland Islands Tourist Board
Fox Bay (Public, Camp)
Goose Green (Public, Camp)
Island LandCare
Members of the Legislative Assembly South Atlantic Environmental Research Institute
Stanley (Public)
Watch Group

Appendix C

Comments from stakeholder engagement on the draft Environment Strategy and responses

During August 2021, the draft Falkland Islands Environment Strategy 2021-2040 was put out for public comment and taken through the Environment Committee. Comments were received by email, or through requested meetings with stakeholders where stakeholders provided feedback. Twenty-two detailed written responses were received, in addition to verbal responses received at two meetings and the comments from the Environment Committee, where multiple stakeholders and the public are represented.

Comments were categorised and summarised and are provided in an anonymised way. These summarised comments are collected in the below table, along with the responses from FIG in terms of the actions taken or to be taken.

Comments	Responses
1. Overall The strategy is a good step forward, represents significant progress and an achievement for the Falkland Islands environment; e.g.: • <i>“It was great to read through the draft strategy, and to see a focus on the long-term sustainability for future generations, with the environment being so central to everything in the Falklands.”</i> • <i>“We are thrilled to see FIG leading on such an important and valuable strategy for the island. It is overwhelmingly positive that FIG are focussing on a cross-cutting environment strategy that transcends government departments, and outlines aspirations and mechanisms for achieving those aspirations. Impressive document and seems to cover a breadth and depth of areas that are pertinent to the Falkland Islands.”</i> • <i>“This is a great achievement in a small country with a population of 3,000 with as many views and opinions. We look forward to this being rolled out over the next months and year...”</i> • <i>“There are a lot of good ideas, intentions and ambitions contained</i>	• We are pleased that there is support within the community and across stakeholders for the strategy, which builds on the support within government, and we intend to continue to work hard to progress the workstreams from the strategy with the support of our community.

<i>and also some ways for delivering on them and measuring.”</i> • <i>“[We] commend the Falkland Islands Government (FIG) on its work to develop stronger environmental ambition. We look forward to working with FIG in helping to develop further specific plans to support the strategy and to make key priorities a reality on the ground. An amazing body of work has already been completed to lay the baseline foundation of this strategy and the initial public engagement was notable for the breadth of consultation across FIG, NGOs and the wider business and civil communities on both East and West Falkland.”</i> • <i>“The Falkland Islands Government’s Environment Department must be applauded for their work engaging with all facets of our community and considering a whole range of views, then formulating The Strategy in a short time.”</i> • <i>“...would like to commend you on your compilation of its contents covering an enormous range of topics.”</i>	
2. Length of consultation. It would have been preferable to have a longer engagement period on the draft strategy. There was also acknowledgement that overall engagement from early on in the strategy development had been extensive. Concerns were raised about the potential of future policy development or workstreams emerging from the strategy to affect industry or the community and whether there would be further engagement.	• We have acknowledged that we were constrained by fixed internal time-frames. • We have advertised the draft strategy widely to encourage responses and have carried out meetings/presentations where requested to facilitate discussion and feedback from stakeholders on the draft strategy. • Overall, engagement has been ongoing with internal (since 2020) and external stakeholders (since February 2021), with multiple points for comment. • The Environment Committee has been kept apprised of developments at multiple meetings, including a final special meeting of the committee purely to facilitate advice on the draft strategy document. • Further/ongoing engagement is anticipated on the workstreams emerging

	from the strategy, as appropriate and part of the standard FIG policy development practice.
3. Ongoing involvement beyond government Organisations or individuals saw themselves contributing to the implementation of the strategy in future. e.g. • “We look forward to this being rolled out over the next months and year and we, as an organisation, look forward to contributing to it.” • “We look forward to working with FIG in helping to develop further specific plans to support the strategy and to make key priorities a reality on the ground.” Conversely, other organisations or individuals were unsure how they would contribute or engage in the strategy in future. e.g. • “Sometimes the language and actions in The Strategy focus overly on FIG activities and does not consider that those outside of the government may also be encouraged to lead or act on specific issues... One example of this is ‘establish additional National Nature Reserves on government owned land’. We see no reason this should be limited to just government land and hope private landowners could also be encouraged to set up reserves if they feel they would be of benefit.” • “I feel that there are a lot of people in the community that want to support FIG and the country as a whole to become more environmentally aware and are looking to the overall strategy to see where they can buy in, but not sure that there is an easy route.” There was some confusion on how the public and experts would be involved in further work or in providing advice on work flowing from the strategy.	• We acknowledge that the possibilities for private sector/community involvement in the implementation on the strategy are still to be explored • Changes were made to the text to further clarify the involvement of private sector and community in the Strategy in Progress section. We also made more mention of this in the highlights section. • The example actions were to show FIG’s commitment. • However, in the actions, more examples of how the private sector would be involved in some targets, e.g. NNRs, has been added. • For the various workstreams emerging from the strategy, it is anticipated that during the fine-scaling work, FIG will be looking for specific opportunities to involve the private sector and the community, as appropriate to that particular topic. This will be different for each workstream. • The vision and strategic objectives of the strategy apply to everyone, and it will also be up to stakeholders to look for opportunities of how their work can align with the objectives and to seek partnerships or support from government on these.
4. Metrics and deadlines. The need to develop SMART targets/indicators/metrics/operational	• The strategy is intended to be an overarching strategy that sets the direction for multiple workstreams.

objectives and firmer deadlines was a common theme. This included comments on defined metrics and specific actions over shorter timeframes or short-term priorities of direct relevance to the community. Others suggested to clarify that strategy is overarching and not a set of plans with detailed SMART targets/metrics.	• The actions given in the strategy document include only examples of future work and are not an exhaustive list. Fine details of actions will be developed within FIG for various workstreams. • Within FIG workstreams and action plans will provide detail on time-bound actions and specific responsibility. These are intended to have shorter term actions working towards a larger stream of work. • Metrics are to be identified as part of this work. • More clarity was provided on the above explanation with respect to next steps in the strategy document.
5. Implementation & resourcing There were questions and suggestions on how the strategy would be implemented, including on how accountability within government would work, how actions would be prioritised, time-frames assigned for actions and progress measured. Comments on financial resourcing included that it would be good to see dedicated resources, e.g. % of GDP devoted to implementation; that it would be good to have seen full costing or financial implications of strategy; there is a need to communicate that implementation may not be easy or cost-effective, but is necessary. Other comments on resourcing included, that the Environment Department be upgraded to Directorate to give parity and authority within the programme board; resourcing of the Environment Department and environment more broadly should be increased.	• Aspects around implementation and resourcing are explained under the strategy in practice section of the strategy document, but further clarity has been provided in the document; see also point 4 above. • Future Assemblies as well as internal governance mechanisms like the Environment Strategy Programme Board will set priorities, accountabilities for specific departments and track progress. • It is not possible to cost all actions that will be needed for the strategy for the next 20 years. • Resourcing will be considered during development of workstreams and action-plans, and will be determined by ExCo through existing budgetary processes within government.
6. Environment Committee and Environment Strategy Programme Board There was some confusion on the respective roles of the Environment Committee and Environment Strategy Programme Board, and whether/how the Environment Committee would be involved going forward.	• The difference between the two was clarified at the Environment Committee and in meetings with stakeholders. Additional clarification on the Programme Board is provided in the draft document. • The Environment Committee, as per its terms of reference, provides advice when requested by ExCo.

	• FIG will take opportunities to share progress with the Environment Committee. • The Environment Strategy Programme Board is an internal civil service mechanism for FIG to guide implementation and track progress. It enables accountability, prioritisation, and a strategic approach going forward.
7. Suggestions of multiple potential targets or actions Many targets and actions were suggested and these either duplicate or add to the many suggestions collected during earlier stakeholder engagement. These included such things as: • Protected areas • Renewable energy: moving forward target time-frames or having a more intermediary step with an earlier deadline; renewable energy for Fox Bay; domestic installations and the grid and hydrogen technology • Restoration or erosion reduction • Food security • Waste reduction including sewerage, single use waste, debris on beaches • Environmentally sustainable tourism • Accessibility	• These suggested actions and targets, as well as the earlier suggestions of stakeholders have been recorded and will be considered as part of further planning under the workstreams that emerge from the strategy that are brought before decision-makers. • There are strategic objectives and planned workstreams that overlap with, or already consider these topics.
8. Priority areas Recurring issues some respondents were particularly concerned about or that they thought were important were (in no particular order): • Impact of climate change including on land • Land management and improvement / erosion • Data cataloguing and review is urgent • NNRs on government land • Increase renewable energy use • Insulation and energy efficiency (in properties) • Waste management (including sewerage) • Water management	• Prioritisation of actions is anticipated for the various workstreams emerging from the strategy, and these suggestions will help to inform that process.

9. Considerations around aquaculture Comments included that aquaculture has potential to impact on multiple themes from the strategy, that it has multiple (environmental) impacts, that it would be useful to have more detail on salmon farming and evidence base collection and decision making, and that it would be good to see action on policy development for salmon aquaculture.	• All themes in the strategy and issues are interrelated. • Aquaculture is considered in the strategy document under Oceans and Coasts and under Sustainable Development and Quality of Life. The need to evaluate the environmental impacts of potential large-scale aquaculture is discussed as an issue. There is also an action to conclude investigations of potential environmental impacts of aquaculture, including large-scale aquaculture. • Policy development in relation to aquaculture is ongoing work that is being led on by the Directorate of Natural Resources.
10. Various minor/editorial Comments Suggestions on specific wording or inclusion of examples, as well as some confusion over two of the figures in the strategy. Some suggestions over structure were also provided.	Captured through changes to the text and figures, as well as some re-ordering of content/structure. Some of the suggestions had been considered in earlier drafts of the strategy and discounted.